

# Sequence Listing

<110> Baker, Kevin  
Botstein, David  
Eaton, Dan  
Ferrara, Napoleone  
Filvaroff, Ellen  
Gerritsen, Mary  
Goddard, Audrey  
Godowski, Paul  
Grimaldi, Christopher  
Gurney, Austin  
Hillan, Kenneth  
Kljavin, Ivar  
Napier, Mary  
Roy, Margaret  
Tumas, Daniel  
Wood, William

<120> SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC  
ACIDS ENCODING THE SAME

<130> P2548P1C1

<150> 60/067,411

<151> December 3, 1997

<150> 60/069,334

<151> December 11, 1997

<150> 60/069335

<151> December 11, 1997

<150> 60/069,278

<151> December 11, 1997

<150> 60/069,425

<151> December 12, 1997

<150> 60/069,696

<151> December 16, 1997

<150> 60/069,694

<151> December 16, 1997

<150> 60/069,702

<151> December 16, 1997

<150> 60/069,870

<151> December 17, 1997

<150> 60/069,873

<151> December 17, 1997

<150> 60/068,017

<151> December 18, 1997

<150> 60/070,440

00944564-033101  
TOP SECRET

0944384-033101  
TOT 030-4884650

<151> January 5, 1998  
  
<150> 60/074,086  
<151> February 9, 1998  
  
<150> 60/074,092  
<151> February 9, 1998  
  
<150> 60/075,945  
<151> February 25, 1998  
  
<150> 60/112,850  
<151> December 16, 1998  
  
<150> 60/113,296  
<151> December 22, 1998  
  
<150> 60/146,222  
<151> July 28, 1999  
  
<150> PCT/US98/19330  
<151> September 16, 1998  
  
<150> PCT/US98/25108  
<151> December 1, 1998  
  
<150> 09/216,021  
<151> December 16, 1998  
  
<150> 09/218,517  
<151> December 22, 1998  
  
<150> 09/254,311  
<151> March 3, 1999  
  
<150> PCT/US99/12252  
<151> June 22, 1999  
  
<150> PCT/US99/21090  
<151> September 15, 1999  
  
<150> PCT/US99/28409  
<151> November 30, 1999  
  
<150> PCT/US99/28313  
<151> November 30, 1999  
  
<150> PCT/US99/28301  
<151> December 1, 1999  
  
<150> PCT/US99/30095  
<151> December 16, 1999  
  
<150> PCT/US00/03565  
<151> February 11, 2000  
  
<150> PCT/US00/04414  
<151> February 22, 2000

<150> PCT/US00/05841  
 <151> March 2, 2000

<150> PCT/US00/08439  
 <151> March 30, 2000

<150> PCT/US00/14042  
 <151> May 22, 2000

<150> PCT/US00/20710  
 <151> July 28, 2000

<150> PCT/US00/32678  
 <151> December 1, 2000

<150> PCT/US01/06520  
 <151> February 28, 2001

<160> 120

<210> 1  
 <211> 2454  
 <212> DNA  
 <213> Homo Sapien

<400> 1  
 ggactaatct gtgggagcag tttattccag tatcaccag ggtgcagcca 50  
 caccaggact gtgttgaagg gtgtttttt tcttttaaata gtaatacctc 100  
 ctcattttt cttcttacac agtgtctgag aacatttaca ttatagataa 150  
 gtagtacatg gtggataact tctactttta ggaggactac tctcttctga 200  
 cagtcctaga ctggctcttct acactaagac accatgaagg agtatgtgct 250  
 cctattattc ctggctttgt gctctgccaa acccttcttt agcccttcac 300  
 acatcgact gaagaatatg atgctgaagg atatggaaga cacagatgat 350  
 gatgatgatg atgatgatga tgatgatgat gatgaggaca actctctttt 400  
 tccaacaaga gagccaagaa gccattttt tccatttgat ctgtttccaa 450  
 tgtgtccatt tggatgtcag tgctattcac gagttgtaca ttgctcagat 500  
 ttaggtttga cctcagtcac aaccaacatt ccatttgata ctcgaatgct 550  
 tgatcttcaa aacaataaaa ttaaggaaat caaagaaaat gatttttaaag 600  
 gactcattc actttatggt ctgactctga acaacaacaa gctaacgaag 650  
 attcaccacaa aagcctttct aaccacaaag aagttgcaa ggctgtatct 700  
 gtcccacaat caactaagtg aaataccact taatcttccc aaatcattag 750  
 cagaactcag aattcatgaa aataaagtta agaaaatata aaaggacaca 800

ttcaaaggaa tgaatgcttt acacgttttg gaaatgagtg caaacccctct 850  
 tgataataat gggatagagc cagggggcatt tgaaggggtg acggtgttcc 900  
 atatcagaat tgcagaagca aaactgacct cagttcctaa aggettacca 950  
 ccaactttat tggagcttca cttagattat aataaaattt caacagtgga 1000  
 acttgaggat tttaaacgat acaaagaact acaaaggctg ggcctaggaa 1050  
 acaacaaaat cacagatata gaaaatggga gtcttgctaa cataccacgt 1100  
 gtgagagaaa tacatttgga aaacaataaa ctaaaaaaaaaa tcccttcagg 1150  
 attaccagag ttgaaatacc tccagataat cttccttcat tctaattcaa 1200  
 ttgcaagagt gggagtaaat gacttctgtc caacagtgcc aaagatgaag 1250  
 aaatctttat acagtgcaat aagtttatc aacaacccgg tgaaatactg 1300  
 ggaaatgcaa cctgcaacat ttcgttgtgt tttgagcaga atgagtgttc 1350  
 agcttgggaa ctttggaatg taataattag taattggtaa tgtccattta 1400  
 atataagatt caaaaatccc tacatttgga atacttgaac tctattaata 1450  
 atggtagtat tatatatata agcaaatatc tattctcaag tggtaagtcc 1500  
 actgacttat tttatgacaa gaaatttcaa cggaattttg ccaaactatt 1550  
 gatacataag gggttgagag aaacaagcat ctattgcagt ttcctttttg 1600  
 cgtacaaatg atcttacata aatctcatgc ttgaccattc ctttcttcat 1650  
 aacaaaaaag taagatatc ggtatttaac actttgttat caagcacatt 1700  
 ttaaaaagaa ctgtactgta aatggaatgc ttgacttagc aaaatttggtg 1750  
 ctctttcatt tgctgttaga aaacagaat taacaaagac agtaatgtga 1800  
 agagtgcatt acactattct tattcttttag taacttgggt agtactgtaa 1850  
 tatttttaat catcttaaag tatgatttga tataatctta ttgaaattac 1900  
 cttatcatgt cttagagccc gtctttatgt ttaaaactaa tttcttaaaa 1950  
 taaagccttc agtaaagtgt cattaccaac ttgataaatg ctactcataa 2000  
 gagctgggtt ggggctatag catatgcttt ttttttttta attattacct 2050  
 gatttaaaaa tctctgtaaa aacgtgtagt gtttcataaa atctgtaact 2100  
 cgcattttta tgatccgcta ttataagctt ttaatagcat gaaaattgtt 2150  
 aggctatata acattgccac ttcaactcta aggaatattt ttgagatata 2200  
 cctttggaag accttgcttg gaagagcctg gacactaaca attctacacc 2250

aaattgtctc ttcaaatacg tatggactgg ataactctga gaaacacatc 2300  
tagtataact gaataagcag agcatcaaat taaacagaca gaaaccgaaa 2350  
gctctatata aatgctcaga gttctttatg tatttcttat tggcattcaa 2400  
catatgtaaa atcagaaaac agggaaattt tcattaaaaa tattgggttg 2450  
aaat 2454

<210> 2  
<211> 379  
<212> PRT  
<213> Homo Sapien

<400> 2  
Met Lys Glu Tyr Val Leu Leu Leu Phe Leu Ala Leu Cys Ser Ala  
1 5 10 15  
Lys Pro Phe Phe Ser Pro Ser His Ile Ala Leu Lys Asn Met Met  
20 25 30  
Leu Lys Asp Met Glu Asp Thr Asp Asp Asp Asp Asp Asp Asp  
35 40 45  
Asp Asp Asp Asp Asp Glu Asp Asn Ser Leu Phe Pro Thr Arg Glu  
50 55 60  
Pro Arg Ser His Phe Phe Pro Phe Asp Leu Phe Pro Met Cys Pro  
65 70 75  
Phe Gly Cys Gln Cys Tyr Ser Arg Val Val His Cys Ser Asp Leu  
80 85 90  
Gly Leu Thr Ser Val Pro Thr Asn Ile Pro Phe Asp Thr Arg Met  
95 100 105  
Leu Asp Leu Gln Asn Asn Lys Ile Lys Glu Ile Lys Glu Asn Asp  
110 115 120  
Phe Lys Gly Leu Thr Ser Leu Tyr Gly Leu Ile Leu Asn Asn Asn  
125 130 135  
Lys Leu Thr Lys Ile His Pro Lys Ala Phe Leu Thr Thr Lys Lys  
140 145 150  
Leu Arg Arg Leu Tyr Leu Ser His Asn Gln Leu Ser Glu Ile Pro  
155 160 165  
Leu Asn Leu Pro Lys Ser Leu Ala Glu Leu Arg Ile His Glu Asn  
170 175 180  
Lys Val Lys Lys Ile Gln Lys Asp Thr Phe Lys Gly Met Asn Ala  
185 190 195  
Leu His Val Leu Glu Met Ser Ala Asn Pro Leu Asp Asn Asn Gly  
200 205 210

00044881-033101

Ile	Glu	Pro	Gly	Ala	Phe	Glu	Gly	Val	Thr	Val	Phe	His	Ile	Arg
				215					220					225
Ile	Ala	Glu	Ala	Lys	Leu	Thr	Ser	Val	Pro	Lys	Gly	Leu	Pro	Pro
				230					235					240
Thr	Leu	Leu	Glu	Leu	His	Leu	Asp	Tyr	Asn	Lys	Ile	Ser	Thr	Val
				245					250					255
Glu	Leu	Glu	Asp	Phe	Lys	Arg	Tyr	Lys	Glu	Leu	Gln	Arg	Leu	Gly
				260					265					270
Leu	Gly	Asn	Asn	Lys	Ile	Thr	Asp	Ile	Glu	Asn	Gly	Ser	Leu	Ala
				275					280					285
Asn	Ile	Pro	Arg	Val	Arg	Glu	Ile	His	Leu	Glu	Asn	Asn	Lys	Leu
				290					295					300
Lys	Lys	Ile	Pro	Ser	Gly	Leu	Pro	Glu	Leu	Lys	Tyr	Leu	Gln	Ile
				305					310					315
Ile	Phe	Leu	His	Ser	Asn	Ser	Ile	Ala	Arg	Val	Gly	Val	Asn	Asp
				320					325					330
Phe	Cys	Pro	Thr	Val	Pro	Lys	Met	Lys	Lys	Ser	Leu	Tyr	Ser	Ala
				335					340					345
Ile	Ser	Leu	Phe	Asn	Asn	Pro	Val	Lys	Tyr	Trp	Glu	Met	Gln	Pro
				350					355					360
Ala	Thr	Phe	Arg	Cys	Val	Leu	Ser	Arg	Met	Ser	Val	Gln	Leu	Gly
				365					370					375
Asn	Phe	Gly	Met											

<210> 3  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Oligonucleotide Probe

<400> 3  
 ggaaatgagt gcaaaccctc 20

<210> 4  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Oligonucleotide Probe

<400> 4  
 tcccaagctg aacactcatt ctgc 24

<210> 5  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide Probe

<400> 5  
gggtgacggt gttccatata agaattgcag aagcaaaact gacctcagtt 50

<210> 6  
<211> 3441  
<212> DNA  
<213> Homo Sapien

<400> 6  
cggaacgcgtg ggccgacgcg tgggcccgcg gcaccgcccc cggcccggcc 50  
ctccgccttc cgcactcgcg cctccctccc tccgcccgtt cccgcgcctt 100  
cctccctccc tctcccccag ctgtcccggt cgcgtcatgc cgagcctccc 150  
ggccccgcgc gccccgctgc tgcctcctcg gctgctgctg ctccgctccc 200  
ggccggcccc cggcgccggc ccagagcccc ccgtgctgcc catccgttct 250  
gagaaggagc cgctgcccgt tgggggagcg gcaggctgca ccttcggcgg 300  
gaaggcttat gccttgagcg agacgtggca cccggacctt gggcagccat 350  
tcgggggatg gcgtgctg ctgtgcgcct gcgaggcgcc tcagtggggg 400  
cgccgtacca ggggccctgg cagggtcagc tgcaagaaca tcaaaccaga 450  
gtgcccacc cgggcctgtg ggcagccgcg ccagctgccc ggacactgct 500  
gccagacctg cccccaggag cgcagcagtt cggagcggca gccgagcggc 550  
ctgtccttcg agtatccgcg ggaccgggag catgcagtt atagcgaccg 600  
cggggagcca ggcgtgagg agcgggcccc tggtagcggc cacacggact 650  
tcgtggcgct gctgacaggg ccgaggtcgc aggcgggtggc acgagccoga 700  
gtctcgtgct tgcgtcttag cctccgcttc tctatctcct acaggcggct 750  
ggaccgcctt accaggatcc gcttctcaga ctccaatggc agtgtcctgt 800  
ttgagcacc tgcagcccc acccaagatg gcctggctctg tgggggtgtg 850  
cgggcagtgc ctccggtgtc tctgcggctc cttagggcag aacagctgca 900  
tgtggcactt gtgacactca ctacccttc aggggaggtc tgggggcctc 950  
tcatccggca ccgggccctg gctgcagaga ccttcagtgc catcctgact 1000  
ctagaaggcc cccacagca gggcgtaggg ggcacacccc tgctcactct 1050

09041341-033101

cagtgcacaca gaggactcct tgcatttttt gctgctcttc cgagggctgc 1100  
 tggaaaccag gagtggggga ctaaccaggg ttcccttgag gctccagatt 1150  
 ctacaccagg ggcagctact gcgagaactt caggccaatg tctcagccca 1200  
 ggaaccaggc tttgctgagg tgctgcccac cctgacagtc caggagatgg 1250  
 actggctggg gctgggggag ctgcagatgg ccctggagtg ggcaggcagg 1300  
 ccagggctgc gcatcagtg acacattgct gccaggaaga gctgcgacgt 1350  
 cctgcaaagt gtcccttggt gggctgatgc cctgatccca gtccagacgg 1400  
 gtgctgccgg ctccagccag ctccagctgc taggaaatgg ctccctgatc 1450  
 tatcaggtgc aagtggtagg gacaagcagt gaggtggtgg ccatgacact 1500  
 ggagaccaag cctcagcggg gggatcagcg cactgtcctg tgccacatgg 1550  
 ctggactcca gccaggagga cacacggccg tgggtatctg ccctgggctg 1600  
 ggtgcccag gggctcatat gctgctgcag aatgagctct tccctgaacgt 1650  
 gggcaccaag gacttcccag acggagagct tcgggggcac gtggctgccc 1700  
 tgccctactg tgggcatagc gcccgccatg acacgctgcc cgtgccccta 1750  
 gcaggagccc tgggtgctacc ccctgtgaag agccaagcag cagggcacgc 1800  
 ctggctttcc ttggataccc actgtcacct gcactatgaa gtgctgctgg 1850  
 ctgggcttgg tggctcagaa caaggcactg tccctgccc cctccttggg 1900  
 cctcctggaa cggcagggcc tggcggtctg ctgaagggat tctatggctc 1950  
 agaggcccag ggtgtggtga aggacctgga gccggaactg ctgcggcacc 2000  
 tggcaaaagg catggcctcc ctgatgatca ccaccaaggg tagccccaga 2050  
 ggggagctcc gagggcaggt gcacatagcc aaccaatgtg aggttggcgg 2100  
 actgcgctg gagggcgccg gggccgaggg ggtgcgggcg ctgggggctc 2150  
 cggatacagc ctctgctgcg ccgcctgtgg tgctggtct cccggcccta 2200  
 gcgcccgcga aacctggtgg tcctgggcgg ccccgagacc ccaacacatg 2250  
 cttcttcgag gggcagcagc gccccacgg ggctcgctgg gcgcccact 2300  
 acgaccgct ctgctcactc tgcacctgcc agagacgaac ggtgatctgt 2350  
 gaccgggtgg tgtgcccacc gccagctgc ccacaccgg tgaggctcc 2400  
 cgaccagtgc tgccctgttt gccctgagaa acaagatgtc agagacttgc 2450  
 cagggtgcc aaggagccgg gaccaggag agggctgcta ttttgatgg 2500



gaccggagct ggcgggcagc gggtagcgcg tggcaccgcc ttgtgcccc 2550  
ctttggetta attaatgtgt ctgtctgcac ctgcaagggg ggcactggag 2600  
aggtgcactg tgagaaggtg cagtgtcccc ggctggcctg tgcccagcct 2650  
gtgctgttca accccaccga ctgtgcaaa cagtgtccag tggggtcggg 2700  
ggccaccgcc cagctggggg accccatgca ggctgatggg ccccggggct 2750  
gccgttttgc tgggcagtggt ttcccagaga gtcagagctg gcaccctca 2800  
gtgccccctt ttggagagat gagctgtatc acctgcagat gtggggcagg 2850  
ggtgcctcac tgtgagcggg atgactgttc actgccactg tcctgtggct 2900  
cggggaagga gagtcgatgc tgttcccgct gcacggccca cggcgggccc 2950  
ccagagacca gaactgatcc agagctggag aaagaagccg aaggctctta 3000  
gggagcagcc agagggccaa gtgaccaaga ggatggggcc tgagctgggg 3050  
aaggggtggc atcagaggacc ttcttgcatt ctctgtggg aagcccagt 3100  
cctttgtctc tctgtcctgc ctctactccc accccacta cctctgggaa 3150  
ccacagctcc acaaggggga gaggcagctg ggccagaccg aggtcacagc 3200  
cactccaagt cctgccctgc caccctcggc ctctgtcctg gaagccccac 3250  
ccctttctc ctgtacataa tgtcactggc ttgttgggat ttttaattta 3300  
tcttactca gcaccaaggg ccccgacac tccactcctg ctgcccctga 3350  
gctgagcaga gtcattattg gagagttttg tatttattaa aacatttctt 3400  
tttcagtcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 3441

<210> 7  
<211> 954  
<212> PRT  
<213> Homo Sapien

<400> 7  
Met Pro Ser Leu Pro Ala Pro Pro Ala Pro Leu Leu Leu Leu Gly  
1 5 10 15  
Leu Leu Leu Leu Gly Ser Arg Pro Ala Arg Gly Ala Gly Pro Glu  
20 25 30  
Pro Pro Val Leu Pro Ile Arg Ser Glu Lys Glu Pro Leu Pro Val  
35 40 45  
Arg Gly Ala Ala Gly Cys Thr Phe Gly Gly Lys Val Tyr Ala Leu  
50 55 60  
Asp Glu Thr Trp His Pro Asp Leu Gly Gln Pro Phe Gly Val Met  
65 70 75

0994484-033101

Arg	Cys	Val	Leu	Cys	Ala	Cys	Glu	Ala	Pro	Gln	Trp	Gly	Arg	Arg	
				80					85					90	
Thr	Arg	Gly	Pro	Gly	Arg	Val	Ser	Cys	Lys	Asn	Ile	Lys	Pro	Glu	
				95					100					105	
Cys	Pro	Thr	Pro	Ala	Cys	Gly	Gln	Pro	Arg	Gln	Leu	Pro	Gly	His	
				110					115					120	
Cys	Cys	Gln	Thr	Cys	Pro	Gln	Glu	Arg	Ser	Ser	Ser	Glu	Arg	Gln	
				125					130					135	
Pro	Ser	Gly	Leu	Ser	Phe	Glu	Tyr	Pro	Arg	Asp	Pro	Glu	His	Arg	
				140					145					150	
Ser	Tyr	Ser	Asp	Arg	Gly	Glu	Pro	Gly	Ala	Glu	Glu	Arg	Ala	Arg	
				155					160					165	
Gly	Asp	Gly	His	Thr	Asp	Phe	Val	Ala	Leu	Leu	Thr	Gly	Pro	Arg	
				170					175					180	
Ser	Gln	Ala	Val	Ala	Arg	Ala	Arg	Val	Ser	Leu	Leu	Arg	Ser	Ser	
				185					190					195	
Leu	Arg	Phe	Ser	Ile	Ser	Tyr	Arg	Arg	Leu	Asp	Arg	Pro	Thr	Arg	
				200					205					210	
Ile	Arg	Phe	Ser	Asp	Ser	Asn	Gly	Ser	Val	Leu	Phe	Glu	His	Pro	
				215					220					225	
Ala	Ala	Pro	Thr	Gln	Asp	Gly	Leu	Val	Cys	Gly	Val	Trp	Arg	Ala	
				230					235					240	
Val	Pro	Arg	Leu	Ser	Leu	Arg	Leu	Leu	Arg	Ala	Glu	Gln	Leu	His	
				245					250					255	
Val	Ala	Leu	Val	Thr	Leu	Thr	His	Pro	Ser	Gly	Glu	Val	Trp	Gly	
				260					265					270	
Pro	Leu	Ile	Arg	His	Arg	Ala	Leu	Ala	Ala	Glu	Thr	Phe	Ser	Ala	
				275					280					285	
Ile	Leu	Thr	Leu	Glu	Gly	Pro	Pro	Gln	Gln	Gly	Val	Gly	Gly	Ile	
				290					295					300	
Thr	Leu	Leu	Thr	Leu	Ser	Asp	Thr	Glu	Asp	Ser	Leu	His	Phe	Leu	
				305					310					315	
Leu	Leu	Phe	Arg	Gly	Leu	Leu	Glu	Pro	Arg	Ser	Gly	Gly	Leu	Thr	
				320					325					330	
Gln	Val	Pro	Leu	Arg	Leu	Gln	Ile	Leu	His	Gln	Gly	Gln	Leu	Leu	
				335					340					345	
Arg	Glu	Leu	Gln	Ala	Asn	Val	Ser	Ala	Gln	Glu	Pro	Gly	Phe	Ala	
				350					355					360	
Glu	Val	Leu	Pro	Asn	Leu	Thr	Val	Gln	Glu	Met	Asp	Trp	Leu	Val	

00944384-083101

365	370	375
Leu Gly Glu Leu Gln Met Ala Leu Glu	Trp Ala Gly Arg Pro Gly	
380	385	390
Leu Arg Ile Ser Gly His Ile Ala Ala	Arg Lys Ser Cys Asp Val	
395	400	405
Leu Gln Ser Val Leu Cys Gly Ala Asp	Ala Leu Ile Pro Val Gln	
410	415	420
Thr Gly Ala Ala Gly Ser Ala Ser Leu	Thr Leu Leu Gly Asn Gly	
425	430	435
Ser Leu Ile Tyr Gln Val Gln Val Val	Gly Thr Ser Ser Glu Val	
440	445	450
Val Ala Met Thr Leu Glu Thr Lys Pro	Gln Arg Arg Asp Gln Arg	
455	460	465
Thr Val Leu Cys His Met Ala Gly Leu	Gln Pro Gly Gly His Thr	
470	475	480
Ala Val Gly Ile Cys Pro Gly Leu Gly	Ala Arg Gly Ala His Met	
485	490	495
Leu Leu Gln Asn Glu Leu Phe Leu Asn	Val Gly Thr Lys Asp Phe	
500	505	510
Pro Asp Gly Glu Leu Arg Gly His Val	Ala Ala Leu Pro Tyr Cys	
515	520	525
Gly His Ser Ala Arg His Asp Thr Leu	Pro Val Pro Leu Ala Gly	
530	535	540
Ala Leu Val Leu Pro Pro Val Lys Ser	Gln Ala Ala Gly His Ala	
545	550	555
Trp Leu Ser Leu Asp Thr His Cys His	Leu His Tyr Glu Val Leu	
560	565	570
Leu Ala Gly Leu Gly Gly Ser Glu Gln	Gly Thr Val Thr Ala His	
575	580	585
Leu Leu Gly Pro Pro Gly Thr Pro Gly	Pro Arg Arg Leu Leu Lys	
590	595	600
Gly Phe Tyr Gly Ser Glu Ala Gln Gly	Val Val Lys Asp Leu Glu	
605	610	615
Pro Glu Leu Leu Arg His Leu Ala Lys	Gly Met Ala Ser Leu Met	
620	625	630
Ile Thr Thr Lys Gly Ser Pro Arg Gly	Glu Leu Arg Gly Gln Val	
635	640	645
His Ile Ala Asn Gln Cys Glu Val Gly	Gly Leu Arg Leu Glu Ala	
650	655	660

0094484 "083101

Ala Gly Ala Glu Gly Val Arg Ala Leu Gly Ala Pro Asp Thr Ala	665	670	675
Ser Ala Ala Pro Pro Val Val Pro Gly Leu Pro Ala Leu Ala Pro	680	685	690
Ala Lys Pro Gly Gly Pro Gly Arg Pro Arg Asp Pro Asn Thr Cys	695	700	705
Phe Phe Glu Gly Gln Gln Arg Pro His Gly Ala Arg Trp Ala Pro	710	715	720
Asn Tyr Asp Pro Leu Cys Ser Leu Cys Thr Cys Gln Arg Arg Thr	725	730	735
Val Ile Cys Asp Pro Val Val Cys Pro Pro Pro Ser Cys Pro His	740	745	750
Pro Val Gln Ala Pro Asp Gln Cys Cys Pro Val Cys Pro Glu Lys	755	760	765
Gln Asp Val Arg Asp Leu Pro Gly Leu Pro Arg Ser Arg Asp Pro	770	775	780
Gly Glu Gly Cys Tyr Phe Asp Gly Asp Arg Ser Trp Arg Ala Ala	785	790	795
Gly Thr Arg Trp His Pro Val Val Pro Pro Phe Gly Leu Ile Lys	800	805	810
Cys Ala Val Cys Thr Cys Lys Gly Gly Thr Gly Glu Val His Cys	815	820	825
Glu Lys Val Gln Cys Pro Arg Leu Ala Cys Ala Gln Pro Val Arg	830	835	840
Val Asn Pro Thr Asp Cys Cys Lys Gln Cys Pro Val Gly Ser Gly	845	850	855
Ala His Pro Gln Leu Gly Asp Pro Met Gln Ala Asp Gly Pro Arg	860	865	870
Gly Cys Arg Phe Ala Gly Gln Trp Phe Pro Glu Ser Gln Ser Trp	875	880	885
His Pro Ser Val Pro Pro Phe Gly Glu Met Ser Cys Ile Thr Cys	890	895	900
Arg Cys Gly Ala Gly Val Pro His Cys Glu Arg Asp Asp Cys Ser	905	910	915
Leu Pro Leu Ser Cys Gly Ser Gly Lys Glu Ser Arg Cys Cys Ser	920	925	930
Arg Cys Thr Ala His Arg Arg Pro Pro Glu Thr Arg Thr Asp Pro	935	940	945
Glu Leu Glu Lys Glu Ala Glu Gly Ser			

<210> 8  
 <211> 44  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Oligonucleotide probe

<400> 8  
 gactagttct agatcgcgag cggccgccct tttttttttt tttt 44

<210> 9  
 <211> 28  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 9  
 cggacgcgtg gggcctgcgc acccagct 28

<210> 10  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 10  
 gccgctcccc gaacgggcag cggctccttc tcagaa 36

<210> 11  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 11  
 ggcgcacagc acgcagcgca tcaccccgaa tggctc 36

<210> 12  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Oligonucleotide Probe

<400> 12  
 gtgctgcca tccgttctga gaagga 26

<210> 13

00944834.033101

<211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 13  
 gcagggtgct caaacaggac ac 22

<210> 14  
 <211> 3231  
 <212> DNA  
 <213> Homo Sapien

<400> 14  
 ggcgagagcag ccctagccgc caccgtcgct ctgcagctc tcgtcgccac 50  
 tgccaccgcc gccgcgtca ctgcgtcctg gtcgcggctc ccgcgccctc 100  
 ccggccggcc atgcagcccc gccgcgccc aagcggcggt gcgcagctgc 150  
 tgcccgctt gccctgctg ctgctgctgc tcggagcggg gccccgaggc 200  
 agctccctgg ccaaccgggt gcccgcgcg cccttgtctg cggccgggccc 250  
 gtgcgcgcg cagccctgcc ggaatggggg tgtgtgcacc tcgcgcctg 300  
 agccggaccc gcagcaccgc gccccgcgc gcgagcctgg ctacagctgc 350  
 acctgccccg ccgggatctc cggcgccaac tgccagcttg ttgcagatcc 400  
 ttgtgccagc aacccttgtc accatggcaa ctgcagcagc agcagcagca 450  
 gcagcagcga tggctacctc tgcatttgca atgaaggcta tgaaggctcc 500  
 aactgtgaac aggcacttcc cagtctccca gccactgggt ggaccgaatc 550  
 catggcacc cgcagcttc agcctgttcc tgcactcag gagcctgaca 600  
 aaatcctgcc tcgtctcag gcaacgggtga cactgcctac ctggcagccg 650  
 aaaacagggc agaaagttgt agaaatgaaa tgggatcaag tggaggtgat 700  
 ccagatatt gcctgtggga atgccagttc taacagctct gcgggtggcc 750  
 gcctgggtatc ctttgaagtgc ccacagaaca cctcagctca gattcggcaa 800  
 gatgccactg cctcactgat tttgctctgg aaggtcacgg ccacaggatt 850  
 ccaacagtgc tccctcatag atggacgaag tgtgaccccc cttcaggctt 900  
 cagggggact ggtcctcctg gaggagatgc tcgccttggg gaataatcac 950  
 tttattgggt ttgtgaatga ttctgtgact aagtctattg tggctttgcg 1000  
 cttactctg gtggtgaagg tcagcacctg tgtgccgggg gagagtcacg 1050

094484.08.101

caaatgactt ggagtgttca ggaaaaggaa aatgcaccac gaagccgtca 1100  
 gaggcaactt tttcctgtac ctgtgaggag cagtacgtgg gtactttctg 1150  
 tgaagaatac gatgcttgcc agaggaaacc ttgccaaaac aacgcgagct 1200  
 gtattgatgc aaatgaaaag caagatggga gcaatttcac ctgtgtttgc 1250  
 cttcctgggtt atactggaga gctttgccag tccaagattg attactgcat 1300  
 cctagacca tgcagaaatg gagcaacatg catttccagt ctcagtggat 1350  
 tcacctgcca gtgtccagaa ggataacttcg gatctgcttg tgaagaaaag 1400  
 gtggaccctt gcgcctcgtc tccgtgccag aacaacggca cctgctatgt 1450  
 ggacggggta cactttacct gcaactgcag cccgggcttc acagggccga 1500  
 cctgtgcccc gcttattgac ttctgtgccc tcagccctg tgetcatggc 1550  
 acgtgcccga gcgtgggcac cagctacaaa tgccctctgtg atccaggtta 1600  
 ccatggcctc tactgtgagg aggaatataa tgagtgcctc tccgctccat 1650  
 gcctgaatgc agccacctgc agggacctcg ttaatggcta tgagtgtgtg 1700  
 tgccctggcag aatacaaagg aacacactgt gaattgtaca aggatccctg 1750  
 cgctaacgtc agctgtctga acggagccac ctgtgacagc gacggcctga 1800  
 atggcacgtg catctgtgca cccgggttta caggatgaaga gtgcgacatt 1850  
 gacataaatg aatgtgacag taaccctcgc caccatgggtg ggagctgcct 1900  
 ggaccagccc aatgggtata actgccactg cccgcatggt tgggtgggag 1950  
 caaactgtga gatccacctc caatggaagt ccgggcacat ggcggagagc 2000  
 ctcaccaaca tgccacggca ctccctctac atcatcattg gagccctctg 2050  
 cgtggccttc atccttatgc tgatcctcct gatcgtgggg atttgccgca 2100  
 tcagccgcat tgaataccag ggttcttcca ggccagccta tgaggagtgc 2150  
 tacaactgcc gcagcatcga cagcgagtgc agcaatgcc ttgcatccat 2200  
 ccggcatgcc aggtttggaa agaaatcccg gcctgcaatg tatgatgtga 2250  
 gccccatcgc ctatgaagat tacagtctctg atgacaaacc cttggtcaca 2300  
 ctgattaaaa ctaaagattt gtaatctttt tttggattat ttttcaaaaa 2350  
 gatgagatac tacactcatt taaatatatt taagaaaata aaaagcttaa 2400  
 gaaatttaaa atgctagctg ctcaagagtt ttcagtagaa tatttaagaa 2450  
 ctaattttct gcagctttta gtttggaata aatattttta aaacaaaatt 2500

0994484-033101

tgtgaaacct atagacgatg ttttaatgta ccttcagctc tctaaactgt 2550  
 gtgctttctac tagtgtgtgc tcttttctact gtagacacta tcacgagacc 2600  
 cagattaatt tctgtggttg ttacagaata agtctaataca aggagaagtt 2650  
 tctgttttgac gtttgagtgc cggcttttctg agtagagtta ggaaaaccac 2700  
 gtaacgtagc atatgatgta taatagagta tacccggttac ttaaaaagaa 2750  
 gtctgaaatg ttcgttttgt ggaaaagaaa ctagttaaat ttactattcc 2800  
 taaccogaat gaaattagcc tttgccttat tctgtgcatg ggtaagtaac 2850  
 ttattttctgc actgttttgt tgaactttgt ggaaacattc tttcgagttt 2900  
 gtttttgtca ttttcgtaac agtcgtcgaa ctaggcctca aaaacatacg 2950  
 taacgaaaag gcctagcgag gcaaattctg attgatttga atctatatatt 3000  
 ttcttttaaaa agtcaagggg tctatatattgt gagtaaatta aatttacatt 3050  
 tgagttgttt gttgctaaga ggtagtaaata gtaagagagt actggttcct 3100  
 tcagtagtga gtattttctca tagtgcagct ttatttatct ccaggatggt 3150  
 tttgtggctg tatttgattg atatgtgctt cttctgattc ttgctaattt 3200  
 ccaaccatat tgaataaatg tgatcaagtc a 3231

<210> 15

<211> 737

<212> PRT

<213> Homo Sapien

<400> 15

Met	Gln	Pro	Arg	Arg	Ala	Gln	Ala	Pro	Gly	Ala	Gln	Leu	Leu	Pro
1				5					10					15

Ala	Leu	Ala	Leu	Leu	Leu	Leu	Leu	Gly	Ala	Gly	Pro	Arg	Gly
			20					25					30

Ser	Ser	Leu	Ala	Asn	Pro	Val	Pro	Ala	Ala	Pro	Leu	Ser	Ala	Pro
			35						40					45

Gly	Pro	Cys	Ala	Ala	Gln	Pro	Cys	Arg	Asn	Gly	Gly	Val	Cys	Thr
			50						55					60

Ser	Arg	Pro	Glu	Pro	Asp	Pro	Gln	His	Pro	Ala	Pro	Ala	Gly	Glu
			65						70					75

Pro	Gly	Tyr	Ser	Cys	Thr	Cys	Pro	Ala	Gly	Ile	Ser	Gly	Ala	Asn
			80						85					90

Cys	Gln	Leu	Val	Ala	Asp	Pro	Cys	Ala	Ser	Asn	Pro	Cys	His	His
			95						100					105

Gly	Asn	Cys	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Asp	Gly	Tyr	Leu
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



0094484-033101

110	115	120
Cys Ile Cys Asn Glu Gly Tyr Glu Gly	Pro Asn Cys Glu Gln Ala	
125	130	135
Leu Pro Ser Leu Pro Ala Thr Gly Trp	Thr Glu Ser Met Ala Pro	
140	145	150
Arg Gln Leu Gln Pro Val Pro Ala Thr	Gln Glu Pro Asp Lys Ile	
155	160	165
Leu Pro Arg Ser Gln Ala Thr Val Thr	Leu Pro Thr Trp Gln Pro	
170	175	180
Lys Thr Gly Gln Lys Val Val Glu Met	Lys Trp Asp Gln Val Glu	
185	190	195
Val Ile Pro Asp Ile Ala Cys Gly Asn	Ala Ser Ser Asn Ser Ser	
200	205	210
Ala Gly Gly Arg Leu Val Ser Phe Glu	Val Pro Gln Asn Thr Ser	
215	220	225
Val Lys Ile Arg Gln Asp Ala Thr Ala	Ser Leu Ile Leu Leu Trp	
230	235	240
Lys Val Thr Ala Thr Gly Phe Gln Gln	Cys Ser Leu Ile Asp Gly	
245	250	255
Arg Ser Val Thr Pro Leu Gln Ala Ser	Gly Gly Leu Val Leu Leu	
260	265	270
Glu Glu Met Leu Ala Leu Gly Asn Asn	His Phe Ile Gly Phe Val	
275	280	285
Asn Asp Ser Val Thr Lys Ser Ile Val	Ala Leu Arg Leu Thr Leu	
290	295	300
Val Val Lys Val Ser Thr Cys Val Pro	Gly Glu Ser His Ala Asn	
305	310	315
Asp Leu Glu Cys Ser Gly Lys Gly Lys	Cys Thr Thr Lys Pro Ser	
320	325	330
Glu Ala Thr Phe Ser Cys Thr Cys Glu	Glu Gln Tyr Val Gly Thr	
335	340	345
Phe Cys Glu Glu Tyr Asp Ala Cys Gln	Arg Lys Pro Cys Gln Asn	
350	355	360
Asn Ala Ser Cys Ile Asp Ala Asn Glu	Lys Gln Asp Gly Ser Asn	
365	370	375
Phe Thr Cys Val Cys Leu Pro Gly Tyr	Thr Gly Glu Leu Cys Gln	
380	385	390
Ser Lys Ile Asp Tyr Cys Ile Leu Asp	Pro Cys Arg Asn Gly Ala	
395	400	405

09944884-083101

Thr Cys Ile Ser	Ser Leu Ser Gly Phe	Thr Cys Gln Cys Pro Glu	410	415	420
Gly Tyr Phe Gly	Ser Ala Cys Glu Glu	Lys Val Asp Pro Cys Ala	425	430	435
Ser Ser Pro Cys	Gln Asn Asn Gly Thr	Cys Tyr Val Asp Gly Val	440	445	450
His Phe Thr Cys	Asn Cys Ser Pro Gly	Phe Thr Gly Pro Thr Cys	455	460	465
Ala Gln Leu Ile	Asp Phe Cys Ala Leu	Ser Pro Cys Ala His Gly	470	475	480
Thr Cys Arg Ser	Val Gly Thr Ser Tyr	Lys Cys Leu Cys Asp Pro	485	490	495
Gly Tyr His Gly	Leu Tyr Cys Glu Glu	Glu Tyr Asn Glu Cys Leu	500	505	510
Ser Ala Pro Cys	Leu Asn Ala Ala Thr	Cys Arg Asp Leu Val Asn	515	520	525
Gly Tyr Glu Cys	Val Cys Leu Ala Glu	Tyr Lys Gly Thr His Cys	530	535	540
Glu Leu Tyr Lys	Asp Pro Cys Ala Asn	Val Ser Cys Leu Asn Gly	545	550	555
Ala Thr Cys Asp	Ser Asp Gly Leu Asn	Gly Thr Cys Ile Cys Ala	560	565	570
Pro Gly Phe Thr	Gly Glu Glu Cys Asp	Ile Asp Ile Asn Glu Cys	575	580	585
Asp Ser Asn Pro	Cys His His Gly Gly	Ser Cys Leu Asp Gln Pro	590	595	600
Asn Gly Tyr Asn	Cys His Cys Pro His	Gly Trp Val Gly Ala Asn	605	610	615
Cys Glu Ile His	Leu Gln Trp Lys Ser	Gly His Met Ala Glu Ser	620	625	630
Leu Thr Asn Met	Pro Arg His Ser Leu	Tyr Ile Ile Ile Gly Ala	635	640	645
Leu Cys Val Ala	Phe Ile Leu Met Leu	Ile Ile Leu Ile Val Gly	650	655	660
Ile Cys Arg Ile	Ser Arg Ile Glu Tyr	Gln Gly Ser Ser Arg Pro	665	670	675
Ala Tyr Glu Glu	Phe Tyr Asn Cys Arg	Ser Ile Asp Ser Glu Phe	680	685	690
Ser Asn Ala Ile	Ala Ser Ile Arg His	Ala Arg Phe Gly Lys Lys			

695

700

705

Ser Arg Pro Ala Met Tyr Asp Val Ser Pro Ile Ala Tyr Glu Asp  
 710 715 720

Tyr Ser Pro Asp Asp Lys Pro Leu Val Thr Leu Ile Lys Thr Lys  
 725 730 735

Asp Leu

<210> 16

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 16

tgtaaaacga cggccagtta aatagacctg caattattaa tct 43

<210> 17

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 17

caggaaacag ctatgaccac ctgcacacct gcaaattccat t 41

<210> 18

<211> 508

<212> DNA

<213> Homo Sapien

<400> 18

ctctggaagg tcacggccac aggattccaa cagtgtctcc tcatagatgg 50

acgaaagtgt gacccccctt tcaggctttc aggggggactg gtcctcctgg 100

aggagatgct cgccttgggg aataatcact ttattggttt tgtgaatgat 150

tctgtgacta agtctattgt ggctttgcgc ttaactctgg tggatgaagg 200

cagcacctgt gtgccggggg agagtcacgc aaatgacttg gagtggttcag 250

gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttctgtacc 300

tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350

gaggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400

aagatgggag caatttcacc tgtgtttgcc ttctgggta tactggagag 450

ctttgccaac cgaactgaga ttggagcgaa cgacctacac cgaactgaga 500

taggggag 508

<210> 19  
<211> 508  
<212> DNA  
<213> Homo Sapien

<400> 19  
ctctggaagg tcacggccac aggattccaa cagtgtctcc tcatagatgg 50  
acgaaagtgt gacccccctt tcaggctttc agggggactg gtcctcctgg 100  
aggagatgct cgccttgggg aataatcact ttattggttt tgtgaatgat 150  
tctgtgacta agtctattgt ggctttgcgc ttaactctgg tggggaaggt 200  
cagcacctgt gtgccggggg agagtcacgc aaatgacttg gagtgttcag 250  
gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttctgtacc 300  
tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350  
gaggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400  
aagatgggag caatttcacc tgtgtttgcc ttctgggta tactggagag 450  
ctttgccaac cgaactgaga ttggagcgaa cgacctacac cgaactgaga 500

taggggag 508

<210> 20  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide Probe

<400> 20  
ctctggaagg tcacggccac agg 23

<210> 21  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 21  
ctcagttcgg ttggcaaagc tctc 24

<210> 22  
<211> 69  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 22

cagtgtctccc tcatagatgg acgaaagtgt gacccccctt tcaggcgaga 50

gctttgccaa ccgaactga 69

<210> 23

<211> 1520

<212> DNA

<213> Homo Sapien

<400> 23

gctgagtctg ctgtctctgc tgctgtgtgt ccagcctgta acctgtgcct 50

acaccacgcc agggcccccc agagccctca ccacgtctgg cgccccaga 100

gccacacca tgccgggcac ctacgtctcc tcgaccacac tcagtagtcc 150

cagcaccag ggctgtcaag agcaggcagc ggccctgatg cgggacttcc 200

cgctcgtgga cggccacaac gacctgcccc tggctctaag gcaggtttac 250

cagaaagggc tacaggatgt taacctgcgc aatttcagct acggccagac 300

cagcctggac aggcttagag atggcctcgt gggcgcccag ttctggtcag 350

cctatgtgcc atgccagacc caggaccggg atgcctgcg cctcaccctg 400

gagcagattg acctcatagc ccgcattgtg gcctcctatt ctgagctgga 450

gcttgtgacc tcggctaaag ctctgaacga cactcagaaa ttggcctgcc 500

tcacgggtgt agaggggtggc cactcgtctg acaatagcct ctccatctta 550

cgtaccttct acatgctggg agtgcgttac ctgacgtca cccacacctg 600

caacacaccc tgggcagaga gctccgctaa gggcgctccac tccttctaca 650

acaacatcag cgggctgact gactttgggt agaaggtggg ggcagaaatg 700

aaccgcctgg gcatgatggg agacttatcc catgtctcag atgctgtggc 750

acggcggggc ctggaagtgt cacaggcacc tgtgatcttc tcccactcgg 800

ctgcccgggg tgtgtgcaac agtgcctgga atgttctga tgacatctg 850

cagcttctga agaagaacgg tggcgtcgtg atgggtgtctt tgtccatggg 900

agtaatacag tgcaacccat cagccaatgt gtccactgtg gcagatcact 950

tcgaccacat caaggctgtc attggatcca agttcatcgg gattgggtgga 1000

gattatgatg gggccggcaa attccctcag gggctggaag acgtgtccac 1050

ataccgggtc ctgatagagg agttgctgag tcgtggctgg agtgaggaag 1100

agcttcaggg tgtccttcgt ggaaacctgc tgcgggtctt cagacaagtg 1150

09944884-093401

gaaaagggtac aggaagaaaa caaatggcaa agcccccttgg aggacaagtt 1200  
 cccggatgag cagctgagca gttcctgcc ctcgcacctc tcacgtctgc 1250  
 gtcagagaca gagtctgact tcaggccagg aactcactga gattcccata 1300  
 cactggacag ccaagttacc agccaagtgg tcagtctcag agtctctccc 1350  
 ccacatggcc ccagtccttg cagttgtggc caccttccca gtccttattc 1400  
 tgtggctctg atgaccagc tagtctgcc agatgtcact gtagcaagcc 1450  
 acagacaccc cacaagttc cctgtgtgtg caggcacaaa tatttctga 1500  
 aataaatggt ttggacatag 1520

<210> 24  
 <211> 433  
 <212> PRT  
 <213> Homo Sapien

<400> 24  
 Met Pro Gly Thr Tyr Ala Pro Ser Thr Thr Leu Ser Ser Pro Ser  
 1 5 10 15  
 Thr Gln Gly Leu Gln Glu Gln Ala Arg Ala Leu Met Arg Asp Phe  
 20 25 30  
 Pro Leu Val Asp Gly His Asn Asp Leu Pro Leu Val Leu Arg Gln  
 35 40 45  
 Val Tyr Gln Lys Gly Leu Gln Asp Val Asn Leu Arg Asn Phe Ser  
 50 55 60  
 Tyr Gly Gln Thr Ser Leu Asp Arg Leu Arg Asp Gly Leu Val Gly  
 65 70 75  
 Ala Gln Phe Trp Ser Ala Tyr Val Pro Cys Gln Thr Gln Asp Arg  
 80 85 90  
 Asp Ala Leu Arg Leu Thr Leu Glu Gln Ile Asp Leu Ile Arg Arg  
 95 100 105  
 Met Cys Ala Ser Tyr Ser Glu Leu Glu Leu Val Thr Ser Ala Lys  
 110 115 120  
 Ala Leu Asn Asp Thr Gln Lys Leu Ala Cys Leu Ile Gly Val Glu  
 125 130 135  
 Gly Gly His Ser Leu Asp Asn Ser Leu Ser Ile Leu Arg Thr Phe  
 140 145 150  
 Tyr Met Leu Gly Val Arg Tyr Leu Thr Leu Thr His Thr Cys Asn  
 155 160 165  
 Thr Pro Trp Ala Glu Ser Ser Ala Lys Gly Val His Ser Phe Tyr  
 170 175 180

09944884-083101

Asn	Asn	Ile	Ser	Gly	Leu	Thr	Asp	Phe	Gly	Glu	Lys	Val	Val	Ala
				185					190					195
Glu	Met	Asn	Arg	Leu	Gly	Met	Met	Val	Asp	Leu	Ser	His	Val	Ser
				200					205					210
Asp	Ala	Val	Ala	Arg	Arg	Ala	Leu	Glu	Val	Ser	Gln	Ala	Pro	Val
				215					220					225
Ile	Phe	Ser	His	Ser	Ala	Ala	Arg	Gly	Val	Cys	Asn	Ser	Ala	Arg
				230					235					240
Asn	Val	Pro	Asp	Asp	Ile	Leu	Gln	Leu	Leu	Lys	Lys	Asn	Gly	Gly
				245					250					255
Val	Val	Met	Val	Ser	Leu	Ser	Met	Gly	Val	Ile	Gln	Cys	Asn	Pro
				260					265					270
Ser	Ala	Asn	Val	Ser	Thr	Val	Ala	Asp	His	Phe	Asp	His	Ile	Lys
				275					280					285
Ala	Val	Ile	Gly	Ser	Lys	Phe	Ile	Gly	Ile	Gly	Gly	Asp	Tyr	Asp
				290					295					300
Gly	Ala	Gly	Lys	Phe	Pro	Gln	Gly	Leu	Glu	Asp	Val	Ser	Thr	Tyr
				305					310					315
Pro	Val	Leu	Ile	Glu	Glu	Leu	Leu	Ser	Arg	Gly	Trp	Ser	Glu	Glu
				320					325					330
Glu	Leu	Gln	Gly	Val	Leu	Arg	Gly	Asn	Leu	Leu	Arg	Val	Phe	Arg
				335					340					345
Gln	Val	Glu	Lys	Val	Gln	Glu	Glu	Asn	Lys	Trp	Gln	Ser	Pro	Leu
				350					355					360
Glu	Asp	Lys	Phe	Pro	Asp	Glu	Gln	Leu	Ser	Ser	Ser	Cys	His	Ser
				365					370					375
Asp	Leu	Ser	Arg	Leu	Arg	Gln	Arg	Gln	Ser	Leu	Thr	Ser	Gly	Gln
				380					385					390
Glu	Leu	Thr	Glu	Ile	Pro	Ile	His	Trp	Thr	Ala	Lys	Leu	Pro	Ala
				395					400					405
Lys	Trp	Ser	Val	Ser	Glu	Ser	Ser	Pro	His	Met	Ala	Pro	Val	Leu
				410					415					420
Ala	Val	Val	Ala	Thr	Phe	Pro	Val	Leu	Ile	Leu	Trp	Leu		
				425					430					

<210> 25

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 25  
agttctggtc agcctatgtg cc 22

<210> 26  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 26  
cgtgatggcg tctttgtcca tggg 24

<210> 27  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 27  
ctccaccaat cccgatgaac ttgg 24

<210> 28  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 28  
gagcagattg acctcatagc ccgatgtgt gcctcctatt ctgagctgga 50

<210> 29  
<211> 1416  
<212> DNA  
<213> Homo Sapien

<400> 29  
aaaacctata aatattccgg attattcata ccgtcccacc atcgggcgcg 50  
gatccgcggc cgcgaattct aaaccaacat gccgggcacc tacgctccct 100  
cgaccacact cagtagtccc agcaccagg gcctgcaaga gcaggcacgg 150  
gccctgatgc gggacttccc gctcgtggac ggccacaacg acctgcccct 200  
ggtcctaagg caggtttacc agaaagggct acaggatgtt aacctgcgca 250  
atttcagcta cggccagacc agcctggaca ggcttagaga tggcctcgtg 300  
ggcgcccagt tctggtcagc ctatgtgcca tgccagaccc aggaccggga 350  
tgccctgcgc ctcaccctgg agcagattga cctcatagc ccgatgtgtg 400



09041364-033101

cctcctattc tgagctggag cttgtgacct cggctaaagc tctgaacgac 450  
 actcagaaat tggcctgcct catcggtgta gaggggtggcc actcgctgga 500  
 caatagcctc tccatcttac gtaccttcta catgctggga gtgcgctacc 550  
 tgacgctcac ccacacctgc aacacaccct gggcagagag ctccgctaag 600  
 ggcgtccact ctttctacaa caacatcagc gggctgactg acttttgtga 650  
 gaagggtggtg gcagaaatga accgcctggg catgatggta gacttatccc 700  
 atgtctcaga tgctgtggca cggcgggccc tggaagtgtc acaggcacct 750  
 gtgatcttct cccactcggc tgcccggggt gtgtgcaaca gtgctcggaa 800  
 tgttcttgat gacatcctgc agcttctgaa gaagaacggt ggcgtcgtga 850  
 tgggtgtcttt gtccatggga gtaatacagt gcaaccatc agccaatgtg 900  
 tccactgtgg cagatcactt cgaccacatc aaggctgtca ttggatccaa 950  
 gttcatcggg attggtggag attatgatgg ggccggcaaa ttcctcagg 1000  
 ggctggaaga cgtgtccaca taccgggtcc tgatagagga gttgctgagt 1050  
 cgtggctgga gtgaggaaga gcttcagggt gtccttcgtg gaaacctgct 1100  
 gcgggtcttc agacaagtgg aaaaggtaca ggaagaaaac aaatggcaaa 1150  
 gcccttgga ggacaagttc cgggatgagc agctgagcag ttctgcccac 1200  
 tccgacctct cacgtctgcg tcagagacag agtctgactt caggccagga 1250  
 actcactgag attcccatc actggacagc caagttacca gccaaagtgg 1300  
 cagtctcaga gtctctcccc caccctgaca aaactcacac atgcccaccg 1350  
 tgcccagcac ctgaactcct ggggggaccg tcagtcttcc tcttcccccc 1400  
 aaaaccaag gacacc 1416

<210> 30

<211> 446

<212> PRT

<213> Homo Sapien

<400> 30

Met	Pro	Gly	Thr	Tyr	Ala	Pro	Ser	Thr	Thr	Leu	Ser	Ser	Pro	Ser
1				5					10					15
Thr	Gln	Gly	Leu	Gln	Glu	Gln	Ala	Arg	Ala	Leu	Met	Arg	Asp	Phe
			20						25					30
Pro	Leu	Val	Asp	Gly	His	Asn	Asp	Leu	Pro	Leu	Val	Leu	Arg	Gln
			35						40					45
Val	Tyr	Gln	Lys	Gly	Leu	Gln	Asp	Val	Asn	Leu	Arg	Asn	Phe	Ser

0904184-033104

	50		55		60
Tyr Gly Gln Thr Ser	Leu Asp Arg Leu Arg Asp Gly Leu Val Gly				
	65		70		75
Ala Gln Phe Trp Ser	Ala Tyr Val Pro Cys Gln Thr Gln Asp Arg				
	80		85		90
Asp Ala Leu Arg Leu	Thr Leu Glu Gln Ile Asp Leu Ile Arg Arg				
	95		100		105
Met Cys Ala Ser Tyr	Ser Glu Leu Glu Leu Val Thr Ser Ala Lys				
	110		115		120
Ala Leu Asn Asp Thr	Gln Lys Leu Ala Cys Leu Ile Gly Val Glu				
	125		130		135
Gly Gly His Ser Leu	Asp Asn Ser Leu Ser Ile Leu Arg Thr Phe				
	140		145		150
Tyr Met Leu Gly Val	Arg Tyr Leu Thr Leu Thr His Thr Cys Asn				
	155		160		165
Thr Pro Trp Ala Glu	Ser Ser Ala Lys Gly Val His Ser Phe Tyr				
	170		175		180
Asn Asn Ile Ser Gly	Leu Thr Asp Phe Gly Glu Lys Val Val Ala				
	185		190		195
Glu Met Asn Arg Leu	Gly Met Met Val Asp Leu Ser His Val Ser				
	200		205		210
Asp Ala Val Ala Arg	Arg Ala Leu Glu Val Ser Gln Ala Pro Val				
	215		220		225
Ile Phe Ser His Ser	Ala Ala Arg Gly Val Cys Asn Ser Ala Arg				
	230		235		240
Asn Val Pro Asp Asp	Ile Leu Gln Leu Leu Lys Lys Asn Gly Gly				
	245		250		255
Val Val Met Val Ser	Leu Ser Met Gly Val Ile Gln Cys Asn Pro				
	260		265		270
Ser Ala Asn Val Ser	Thr Val Ala Asp His Phe Asp His Ile Lys				
	275		280		285
Ala Val Ile Gly Ser	Lys Phe Ile Gly Ile Gly Gly Asp Tyr Asp				
	290		295		300
Gly Ala Gly Lys Phe	Pro Gln Gly Leu Glu Asp Val Ser Thr Tyr				
	305		310		315
Pro Val Leu Ile Glu	Glu Leu Leu Ser Arg Gly Trp Ser Glu Glu				
	320		325		330
Glu Leu Gln Gly Val	Leu Arg Gly Asn Leu Leu Arg Val Phe Arg				
	335		340		345

Gln Val Glu Lys Val Gln Glu Glu Asn Lys Trp Gln Ser Pro Leu		
	350	360
Glu Asp Lys Phe Pro Asp Glu Gln Leu Ser Ser Ser Cys His Ser		
	365	375
Asp Leu Ser Arg Leu Arg Gln Arg Gln Ser Leu Thr Ser Gly Gln		
	380	390
Glu Leu Thr Glu Ile Pro Ile His Trp Thr Ala Lys Leu Pro Ala		
	395	405
Lys Trp Ser Val Ser Glu Ser Ser Pro His Pro Asp Lys Thr His		
	410	420
Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser		
	425	435
Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr		
	440	445

<210> 31  
 <211> 1790  
 <212> DNA  
 <213> Homo Sapien

<400> 31  
 cgcccagcga cgtgcgggcg gcctggcccg cgccctcccg cgcccgccct 50  
 gcgtcccgcg cctgcgcca ccgcgcgcga gccgcagccc gccgcgcgcc 100  
 cccggcagcg ccggccccat gcccgcgggc cgccggggcc ccgcgcacca 150  
 atccgcgcgg cggccgcgcg cgttgctgcc cctgctgctg ctgctctgcg 200  
 tcctcggggc gccgcgagcc ggatcaggag ccacacagc tgtgatcagt 250  
 ccccaggatc ccacgcttct catcggtccc tccctgctgg ccacctgctc 300  
 agtgcacgga gaccacaccag gagccaccgc cgagggcctc tactggaccc 350  
 tcaacggggc ccgcctgccc cctgagctct cccgtgtact caacgcctcc 400  
 accttggtc tggccctggc caacctcaat ggggccaggc agcggtcggg 450  
 ggacaacctc gtgtgccacg cccgtgacgg cagcatcctg gctggctcct 500  
 gcctctatgt tggcctgccc ccagagaaac ccgtcaacat cagctgctgg 550  
 tccaagaaca tgaaggactt gacctgccgc tggacgccag gggcccacgg 600  
 ggagaccttc ctccacacca actactccct caagtacaag cttaggtggg 650  
 atggccagga caacacatgt gaggagtacc acacagtggg gcccactcc 700  
 tgccacatcc ccaaggacct ggctctcttt acgccctatg agatctgggt 750  
 ggaggccacc aaccgcctgg gctctgcccg ctccgatgta ctcacgctgg 800

09041834.033104

atatactgga tgtggtgacc acggaccccc cgcccagcgt gcacgtgagc 850  
 cgcgtcgggg gcctggagga ccagctgagc gtgcgctggg tgtegccacc 900  
 cgccctcaag gatttctctt ttcaagccaa ataccagatc cgctaccgag 950  
 tggaggacag tgtggactgg aaggtggtgg acgatgtgag caaccagacc 1000  
 tcctgccgcc tggccggcct gaaacccggc accgtgtact tcgtgcaagt 1050  
 gcgctgcaac ccttttggca tctatggctc caagaaagcc gggatctgga 1100  
 gtgagtggag ccacccacaa gccgcctcca ctccccgcag tgagcgcccg 1150  
 ggcccggggc gcggggcggt cgaaccgcgg ggccggagagc cgagctcggg 1200  
 gccggtgcgg cgcgagctca agcagttcct gggctggctc aagaagcacg 1250  
 cgtactgctc caacctcagc ttccgcctct acgaccagtg gcgagcctgg 1300  
 atgcagaagt cgcacaagac ccgcaaccag gacgagggga tcctgccctc 1350  
 gggcagacgg ggcacggcga gaggtcctgc cagataagct gtaggggctc 1400  
 aggccacct cctgccacg tggagacgca gaggccgaac ccaaactggg 1450  
 gccacctctg taccctcact tcagggcacc tgagccaccc tcagcaggag 1500  
 ctgggggtggc cctgagctc caacggccat aacagctctg actcccacgt 1550  
 gaggccacct ttgggtgcac ccagtggggt gtgtgtgtgt gtgtgaggggt 1600  
 tggttgagtt gcctagaacc cctgccaggg ctgggggtga gaaggggagt 1650  
 cattactccc cattacctag ggccccctcca aaagagtcct tttaaataaa 1700  
 tgagctatct aggtgctgtg attgtgaaaa aaaaaaaaaa aaaaaaaaaa 1750  
 aaaaaaaaaa aaaaaaaaaa aaaaacaaaa aaaaaaaaaa 1790

<210> 32  
 <211> 422  
 <212> PRT  
 <213> Homo Sapien

<400> 32  
 Met Pro Ala Gly Arg Arg Gly Pro Ala Ala Gln Ser Ala Arg Arg  
 1 5 10 15  
 Pro Pro Pro Leu Leu Pro Leu Leu Leu Leu Cys Val Leu Gly  
 20 25 30  
 Ala Pro Arg Ala Gly Ser Gly Ala His Thr Ala Val Ile Ser Pro  
 35 40 45  
 Gln Asp Pro Thr Leu Leu Ile Gly Ser Ser Leu Leu Ala Thr Cys  
 50 55 60

0044884-03401

Ser	Val	His	Gly	Asp	Pro	Pro	Gly	Ala	Thr	Ala	Glu	Gly	Leu	Tyr			
				65					70					75			
Trp	Thr	Leu	Asn	Gly	Arg	Arg	Leu	Pro	Pro	Glu	Leu	Ser	Arg	Val			
				80					85					90			
Leu	Asn	Ala	Ser	Thr	Leu	Ala	Leu	Ala	Leu	Ala	Asn	Leu	Asn	Gly			
				95					100					105			
Ser	Arg	Gln	Arg	Ser	Gly	Asp	Asn	Leu	Val	Cys	His	Ala	Arg	Asp			
				110					115					120			
Gly	Ser	Ile	Leu	Ala	Gly	Ser	Cys	Leu	Tyr	Val	Gly	Leu	Pro	Pro			
				125					130					135			
Glu	Lys	Pro	Val	Asn	Ile	Ser	Cys	Trp	Ser	Lys	Asn	Met	Lys	Asp			
				140					145					150			
Leu	Thr	Cys	Arg	Trp	Thr	Pro	Gly	Ala	His	Gly	Glu	Thr	Phe	Leu			
				155					160					165			
His	Thr	Asn	Tyr	Ser	Leu	Lys	Tyr	Lys	Leu	Arg	Trp	Tyr	Gly	Gln			
				170					175					180			
Asp	Asn	Thr	Cys	Glu	Glu	Tyr	His	Thr	Val	Gly	Pro	His	Ser	Cys			
				185					190					195			
His	Ile	Pro	Lys	Asp	Leu	Ala	Leu	Phe	Thr	Pro	Tyr	Glu	Ile	Trp			
				200					205					210			
Val	Glu	Ala	Thr	Asn	Arg	Leu	Gly	Ser	Ala	Arg	Ser	Asp	Val	Leu			
				215					220					225			
Thr	Leu	Asp	Ile	Leu	Asp	Val	Val	Thr	Thr	Asp	Pro	Pro	Pro	Asp			
				230					235					240			
Val	His	Val	Ser	Arg	Val	Gly	Gly	Leu	Glu	Asp	Gln	Leu	Ser	Val			
				245					250					255			
Arg	Trp	Val	Ser	Pro	Pro	Ala	Leu	Lys	Asp	Phe	Leu	Phe	Gln	Ala			
				260					265					270			
Lys	Tyr	Gln	Ile	Arg	Tyr	Arg	Val	Glu	Asp	Ser	Val	Asp	Trp	Lys			
				275					280					285			
Val	Val	Asp	Asp	Val	Ser	Asn	Gln	Thr	Ser	Cys	Arg	Leu	Ala	Gly			
				290					295					300			
Leu	Lys	Pro	Gly	Thr	Val	Tyr	Phe	Val	Gln	Val	Arg	Cys	Asn	Pro			
				305					310					315			
Phe	Gly	Ile	Tyr	Gly	Ser	Lys	Lys	Ala	Gly	Ile	Trp	Ser	Glu	Trp			
				320					325					330			
Ser	His	Pro	Thr	Ala	Ala	Ser	Thr	Pro	Arg	Ser	Glu	Arg	Pro	Gly			
				335					340					345			
Pro	Gly	Gly	Gly	Ala	Cys	Glu	Pro	Arg	Gly	Gly	Glu	Pro	Ser	Ser			

350	355	360
Gly Pro Val Arg Arg Glu Leu Lys Gln Phe Leu Gly Trp Leu Lys		
365	370	375
Lys His Ala Tyr Cys Ser Asn Leu Ser Phe Arg Leu Tyr Asp Gln		
380	385	390
Trp Arg Ala Trp Met Gln Lys Ser His Lys Thr Arg Asn Gln Asp		
395	400	405
Glu Gly Ile Leu Pro Ser Gly Arg Arg Gly Thr Ala Arg Gly Pro		
410	415	420

Ala Arg

<210> 33  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 33  
 cccgcccgcac gtgcacgtga gcc 23

<210> 34  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 34  
 tgagccagcc caggaactgc ttg 23

<210> 35  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 35  
 caagtgcgct gcaaccctt tggcatctat ggctccaaga aagccgggat 50

<210> 36  
 <211> 1771  
 <212> DNA  
 <213> Homo Sapien

<400> 36  
 cccacgcgtc cgctgggtgtt agatcgagca accctctaaa agcagtttag 50

agtggtaaaa aaaaaaaaaa acacacccaaa cgctcgccgc cacaaaaggg 100  
 atgaaatttc ttctggacat cctcctgctt ctcccgttac tgategtctg 150  
 ctccctagag tcttctgtga agctttttat tctaagagg agaaaatcag 200  
 tcaccggcga aatcgtgctg attacaggag ctgggcatgg aattgggaga 250  
 ctgactgcct atgaatttgc taaacttaaa agcaagctgg ttctctggga 300  
 tataaataag catggactgg aggaaacagc tgccaaatgc aagggaactgg 350  
 gtgccaaggt tcataccttt gtggtagact gcagcaaccg agaagatatt 400  
 tacagctctg caaagaaggt gaaggcagaa attggagatg ttagtatttt 450  
 agtaaataat gctggtgtag tctatacatc agatttgttt gctacacaag 500  
 atcctcagat tgaaaagact tttgaagtta atgtacttgc acattttctgg 550  
 actacaaagg catttcttcc tgcaatgacg aagaataacc atggccatat 600  
 tgtcactgtg gcttcggcag ctggacatgt ctcggtcccc ttcttactgg 650  
 cttactgttc aagcaagttt gctgctgttg gatttcataa aactttgaca 700  
 gatgaactgg ctgccttaca aataactgga gtcaaaaaca catgtctgtg 750  
 tctaatttc gtaaactctg gcttcatcaa aaatccaagt acaagtttgg 800  
 gaccactct ggaacctgag gaagtggtaa acaggctgat gcatgggatt 850  
 ctgactgagc agaagatgat ttttattcca tcttctatag cttttttaac 900  
 aacattggaa aggatccttc ctgagcgttt cctggcagtt ttaaaacgaa 950  
 aaatcagtgt taagtttgat gcagttattg gatataaaat gaaagcgcaa 1000  
 taagcaccta gttttctgaa aactgattta ccaggtttag gttgatgtca 1050  
 tctaatagtg ccagaatttt aatgtttgaa cttctgtttt ttctaattat 1100  
 cccattttct tcaatatcat ttttgaggct ttggcagctc tcatttacta 1150  
 ccacttgttc tttagccaaa agctgattac atatgatata aacagagaaa 1200  
 tacctttaga ggtgacttta aggaaaatga agaaaaagaa ccaaatgac 1250  
 tttattaaaa taatttccaa gattatttgt ggctcacctg aaggctttgc 1300  
 aaaatttgta ccataaccgt ttatttaaca tatattttta tttttgattg 1350  
 cacttaaatt ttgtataatt tgtgtttctt tttctgttct acataaaatc 1400  
 agaaacttca agctctctaa ataaaatgaa ggactatata tagtggtatt 1450  
 tcacaatgaa tatcatgaac tctcaatggg taggtttcat cctaccatt 1500

gccactctgt ttctgagag atacctcaca ttccaatgcc aaacatttct 1550  
gcacagggaa gctagaggtg gatacacgtg ttgcaagtat aaaagcatca 1600  
ctgggattta aggagaattg agagaatgta cccacaaatg gcagcaataa 1650  
taaatggatc acacttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1700  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1750  
aaaaaaaaaa aaaaaaaaaa a 1771

<210> 37  
<211> 300  
<212> PRT  
<213> Homo Sapien

<400> 37

Met	Lys	Phe	Leu	Leu	Asp	Ile	Leu	Leu	Leu	Leu	Pro	Leu	Leu	Ile	1	5	10	15
Val	Cys	Ser	Leu	Glu	Ser	Phe	Val	Lys	Leu	Phe	Ile	Pro	Lys	Arg	20	25	30	
Arg	Lys	Ser	Val	Thr	Gly	Glu	Ile	Val	Leu	Ile	Thr	Gly	Ala	Gly	35	40	45	
His	Gly	Ile	Gly	Arg	Leu	Thr	Ala	Tyr	Glu	Phe	Ala	Lys	Leu	Lys	50	55	60	
Ser	Lys	Leu	Val	Leu	Trp	Asp	Ile	Asn	Lys	His	Gly	Leu	Glu	Glu	65	70	75	
Thr	Ala	Ala	Lys	Cys	Lys	Gly	Leu	Gly	Ala	Lys	Val	His	Thr	Phe	80	85	90	
Val	Val	Asp	Cys	Ser	Asn	Arg	Glu	Asp	Ile	Tyr	Ser	Ser	Ala	Lys	95	100	105	
Lys	Val	Lys	Ala	Glu	Ile	Gly	Asp	Val	Ser	Ile	Leu	Val	Asn	Asn	110	115	120	
Ala	Gly	Val	Val	Tyr	Thr	Ser	Asp	Leu	Phe	Ala	Thr	Gln	Asp	Pro	125	130	135	
Gln	Ile	Glu	Lys	Thr	Phe	Glu	Val	Asn	Val	Leu	Ala	His	Phe	Trp	140	145	150	
Thr	Thr	Lys	Ala	Phe	Leu	Pro	Ala	Met	Thr	Lys	Asn	Asn	His	Gly	155	160	165	
His	Ile	Val	Thr	Val	Ala	Ser	Ala	Ala	Gly	His	Val	Ser	Val	Pro	170	175	180	
Phe	Leu	Leu	Ala	Tyr	Cys	Ser	Ser	Lys	Phe	Ala	Ala	Val	Gly	Phe	185	190	195	
His	Lys	Thr	Leu	Thr	Asp	Glu	Leu	Ala	Ala	Leu	Gln	Ile	Thr	Gly				

0094484-083101



200	205	210
Val Lys Thr Thr Cys Leu Cys Pro Asn Phe Val Asn Thr Gly Phe		
215	220	225
Ile Lys Asn Pro Ser Thr Ser Leu Gly Pro Thr Leu Glu Pro Glu		
230	235	240
Glu Val Val Asn Arg Leu Met His Gly Ile Leu Thr Glu Gln Lys		
245	250	255
Met Ile Phe Ile Pro Ser Ser Ile Ala Phe Leu Thr Thr Leu Glu		
260	265	270
Arg Ile Leu Pro Glu Arg Phe Leu Ala Val Leu Lys Arg Lys Ile		
275	280	285
Ser Val Lys Phe Asp Ala Val Ile Gly Tyr Lys Met Lys Ala Gln		
290	295	300

<210> 38  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 38  
 ggtgaaggca gaaattggag atg 23

<210> 39  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 39  
 atcccatgca tcagcctgtt tacc 24

<210> 40  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 40  
 gctggtgtag tctatacatc agatttggtt gctacacaag atcctcag 48

<210> 41  
 <211> 1377  
 <212> DNA  
 <213> Homo Sapien

00941384-033101

<400> 41

gactagttct cttggagtct gggaggagga aagcggagcc ggcagggagc 50  
gaaccaggac tggggtgacg gcagggcagg gggcgcttgg ccggggagaa 100  
gcgcgggggc tggagcacca ccaactggag ggtccggagt agcgagcgcc 150  
ccgaaggagg ccatcgggga gccgggaggg gggactgcga gaggaccccg 200  
gcgtccgggc tcccggtgcc agcgctatga gggcactcct cgtcctgctg 250  
ctcctggggc tggcgggcgg ctcgccccca ctggacgaca acaagatccc 300  
cagcctctgc ccggggcacc ccggccttcc aggcacgccg ggccaccatg 350  
gcagccaggg cttgccgggc cgcgatggcc gcgacggccg cgacggcgcg 400  
cccggggctc cgggagagaa aggcgagggc gggaggccgg gactgccggg 450  
acctcgaggg gaccccgggc cgcgaggaga ggcgggaccc gcggggccca 500  
ccgggcctgc cggggagtgc tccgtgcctc cgcgatccgc cttcagcgcc 550  
aagcgctccg agagccgggt gcctccgccg tctgacgcac ccttgccctt 600  
cgaccgcgtg ctggtgaacg agcagggaca ttacgacgcc gtcaccggca 650  
agtccacctg ccaggtgcct ggggtctact acttcgccgt ccatgccacc 700  
gtctaccggg ccagcctgca gtttgatctg gtgaagaatg gcgaatccat 750  
tgctctttc ttccagtttt tgggggggtg gcccagcca gcctcgctct 800  
cggggggggc catggtgagg ctggagcctg aggaccaagt gtgggtgcag 850  
gtgggtgtgg gtgactacat tggcatctat gccagcatca agacagacag 900  
caccttctcc ggatttctgg tgtactccga ctggcacagc tccccagtct 950  
ttgcttagtg cccactgcaa agtgagctca tgcctcact cctagaagga 1000  
gggtgtgagg ctgacaacca ggtcatccag gagggctggc cccctggaa 1050  
tattgtgaat gactagggag gtggggtaga gcaactcctg tctgctgct 1100  
ggcaaggaat gggaacagtg gctgtctgcg atcaggctctg gcagcatggg 1150  
gcagtggctg gatttctgcc caagaccaga ggagtgtgct gtgctggcaa 1200  
gtgtaagtcc ccagttgct ctggtccagg agcccacggg ggggtgctct 1250  
cttctggtc ctctgcttct ctggatectc cccacccct cctgctcctg 1300  
gggccggccc ttttctcaga gatcactcaa taaacctaa aacctcata 1350  
aaaaaaaaa aaaaaaaaaa aaaaaaa 1377

<210> 42

<211> 243  
 <212> PRT  
 <213> Homo Sapien

<400> 42

Met	Arg	Pro	Leu	Leu	Val	Leu	Leu	Leu	Leu	Gly	Leu	Ala	Ala	Gly	1	5	10	15
Ser	Pro	Pro	Leu	Asp	Asp	Asn	Lys	Ile	Pro	Ser	Leu	Cys	Pro	Gly	20	25	30	
His	Pro	Gly	Leu	Pro	Gly	Thr	Pro	Gly	His	His	Gly	Ser	Gln	Gly	35	40	45	
Leu	Pro	Gly	Arg	Asp	Gly	Arg	Asp	Gly	Arg	Asp	Gly	Ala	Pro	Gly	50	55	60	
Ala	Pro	Gly	Glu	Lys	Gly	Glu	Gly	Gly	Arg	Pro	Gly	Leu	Pro	Gly	65	70	75	
Pro	Arg	Gly	Asp	Pro	Gly	Pro	Arg	Gly	Glu	Ala	Gly	Pro	Ala	Gly	80	85	90	
Pro	Thr	Gly	Pro	Ala	Gly	Glu	Cys	Ser	Val	Pro	Pro	Arg	Ser	Ala	95	100	105	
Phe	Ser	Ala	Lys	Arg	Ser	Glu	Ser	Arg	Val	Pro	Pro	Pro	Ser	Asp	110	115	120	
Ala	Pro	Leu	Pro	Phe	Asp	Arg	Val	Leu	Val	Asn	Glu	Gln	Gly	His	125	130	135	
Tyr	Asp	Ala	Val	Thr	Gly	Lys	Phe	Thr	Cys	Gln	Val	Pro	Gly	Val	140	145	150	
Tyr	Tyr	Phe	Ala	Val	His	Ala	Thr	Val	Tyr	Arg	Ala	Ser	Leu	Gln	155	160	165	
Phe	Asp	Leu	Val	Lys	Asn	Gly	Glu	Ser	Ile	Ala	Ser	Phe	Phe	Gln	170	175	180	
Phe	Phe	Gly	Gly	Trp	Pro	Lys	Pro	Ala	Ser	Leu	Ser	Gly	Gly	Ala	185	190	195	
Met	Val	Arg	Leu	Glu	Pro	Glu	Asp	Gln	Val	Trp	Val	Gln	Val	Gly	200	205	210	
Val	Gly	Asp	Tyr	Ile	Gly	Ile	Tyr	Ala	Ser	Ile	Lys	Thr	Asp	Ser	215	220	225	
Thr	Phe	Ser	Gly	Phe	Leu	Val	Tyr	Ser	Asp	Trp	His	Ser	Ser	Pro	230	235	240	
Val	Phe	Ala																

<210> 43  
 <211> 24

00944884.033101

<212> DNA  
<213> Artificial Sequence

```
<220>
<223> Synthetic oligonucleotide probe
```

```
<400> 43
tacaggccca gtcaggacca gggg 24
```

```
<210> 44
<211> 18
<212> DNA
<213> Artificial Sequence
```

<220>  
<223> Synthetic oligonucleotide probe

```
<400> 44
agccagcctc gctctcgg 18
```

```
<210> 45
<211> 18
<212> DNA
<213> Artificial Sequence
```

<220>  
<223> Synthetic oligonucleotide probe

```
<400> 45
gtctgcgatc aggtctgg 18
```

```
<210> 46
<211> 20
<212> DNA
<213> Artificial Sequence
```

<220>  
<223> Synthetic oligonucleotide probe

<400> 46  
gaaagaggca atggattcgc 20

```
<210> 47
<211> 24
<212> DNA
<213> Artificial Sequence
```

<220>  
<223> Synthetic oligonucleotide probe

```
<400> 47
gacttacact tgccagcaca gcac 24
```

```
<210> 48
<211> 45
<212> DNA
<213> Artificial Sequence
```

<220>

<223> Synthetic oligonucleotide probe

<400> 48

ggagcaccac caactggagg gtccggagta gcgagcgccc cgaag 45

<210> 49

<211> 1876

<212> DNA

<213> Homo Sapien

<400> 49

ctcttttgtc caccagccca gcctgactcc tggagattgt gaatagctcc 50

atccagcctg agaaacaagc cgggtggctg agccaggctg tgcacggagc 100

acctgacggg cccaacagac ccatgctgca tccagagacc tcccctggcc 150

gggggcatct cctggctgtg ctcttgcccc tccttggcac cacctgggca 200

gaggtgtggc caccacagct gcaggagcag gctccgatgg ccggagccct 250

gaacaggaag gagagtttct tgctcctctc cctgcacaac cgcttgcgca 300

gctgggtcca gcccctgcg gctgacatgc ggaggctgga ctggagtgc 350

agcctggccc aactggctca agccagggca gccctctgtg gaatcccaac 400

cccgagcctg gcatccggcc tgtggcgcac cctgcaagtg ggctggaaca 450

tgcagctgct gcccgcgggc ttggcgctct ttgttgaagt ggtcagccta 500

tggtttgtag aggggcagcg gtacagccac gcggcaggag agtgtgctcg 550

caacgccacc tgcaccact acacgcagct cgtgtggggc acctcaagcc 600

agctgggctg tgggcggcac ctgtgctctg caggccagac agcgatagaa 650

gcctttgtct gtgcctactc ccccgaggc aactgggagg tcaacgggaa 700

gacaatcacc cctataaga aggggtgcctg gtgttcgctc tgcacagcca 750

gtgtctcagg ctgcttcaaa gcctgggacc atgcaggggg gctctgtgag 800

gtccccagga atccttgtcg catgagctgc cagaaccatg gacgtctcaa 850

catcagcacc tgccactgcc actgtccccc tggctacacg ggcagatact 900

gccaagtgcg gtgcagcctg cagtgtgtgc acggccgggt ccgggaggag 950

gagtgtctcg gcgtctgtga catcggctac gggggagccc agtgtgccac 1000

caaggtgcat tttcccttcc acacctgtga cctgaggatc gacggagact 1050

gcttcatggg gtcttcagag gcagacacct attacagagc caggatgaaa 1100

tgtcagagga aaggcggggg gctggccccg atcaagagcc agaaagtgc 1150

CG4434-03104

ggacatcctc gccttctatc tgggccgcct ggagaccacc aacgaggtga 1200  
 ctgacagtga cttcgagacc aggaacttct ggatcgggct cacctacaag 1250  
 accgccaagg actccttccg ctgggccaca ggggagcacc aggccttcac 1300  
 cagttttgcc tttgggcagc ctgacaacca cgggctggtg tggctgagtg 1350  
 ctgccatggg gtttggcaac tgcgtggagc tgcaggcttc agctgccttc 1400  
 aactggaacg accagcgtg caaaacccga aaccgttaca tctgccagtt 1450  
 tgcccaggag cacatctccc ggtggggccc agggctctga ggctgacca 1500  
 catggctccc tcgctgccc tgggagcacc ggctctgctt acctgtctgc 1550  
 ccacctgtct ggaacaaggg ccaggttaag accacatgcc tcatgtccaa 1600  
 agaggtctca gaccttgac aatgccagaa gttgggcaga gagaggcagg 1650  
 gaggccagtg agggccaggg agtgagtgtt agaagaagct ggggcccttc 1700  
 gcctgctttt gattgggaag atgggcttca attagatggc gaaggagagg 1750  
 acaccgccag tgggtccaaa aggctgctct cttccacctg gccagaccc 1800  
 tgtggggcag cggagcttcc ctgtggcatg aacccacgg ggtattaaat 1850  
 tatgaatcag ctgaaaaaaaa aaaaaa 1876

<210> 50  
 <211> 455  
 <212> PRT  
 <213> Homo Sapien

<400> 50  
 Met Leu His Pro Glu Thr Ser Pro Gly Arg Gly His Leu Leu Ala  
 1 5 10 15  
 Val Leu Leu Ala Leu Leu Gly Thr Thr Trp Ala Glu Val Trp Pro  
 20 25 30  
 Pro Gln Leu Gln Glu Gln Ala Pro Met Ala Gly Ala Leu Asn Arg  
 35 40 45  
 Lys Glu Ser Phe Leu Leu Leu Ser Leu His Asn Arg Leu Arg Ser  
 50 55 60  
 Trp Val Gln Pro Pro Ala Ala Asp Met Arg Arg Leu Asp Trp Ser  
 65 70 75  
 Asp Ser Leu Ala Gln Leu Ala Gln Ala Arg Ala Ala Leu Cys Gly  
 80 85 90  
 Ile Pro Thr Pro Ser Leu Ala Ser Gly Leu Trp Arg Thr Leu Gln  
 95 100 105  
 Val Gly Trp Asn Met Gln Leu Leu Pro Ala Gly Leu Ala Ser Phe

0994484-083101

110	115	120
Val Glu Val Val Ser Leu Trp Phe Ala	Glu Gly Gln Arg Tyr Ser	
125	130	135
His Ala Ala Gly Glu Cys Ala Arg Asn	Ala Thr Cys Thr His Tyr	
140	145	150
Thr Gln Leu Val Trp Ala Thr Ser Ser	Gln Leu Gly Cys Gly Arg	
155	160	165
His Leu Cys Ser Ala Gly Gln Thr Ala	Ile Glu Ala Phe Val Cys	
170	175	180
Ala Tyr Ser Pro Gly Gly Asn Trp Glu	Val Asn Gly Lys Thr Ile	
185	190	195
Ile Pro Tyr Lys Lys Gly Ala Trp Cys	Ser Leu Cys Thr Ala Ser	
200	205	210
Val Ser Gly Cys Phe Lys Ala Trp Asp	His Ala Gly Gly Leu Cys	
215	220	225
Glu Val Pro Arg Asn Pro Cys Arg Met	Ser Cys Gln Asn His Gly	
230	235	240
Arg Leu Asn Ile Ser Thr Cys His Cys	His Cys Pro Pro Gly Tyr	
245	250	255
Thr Gly Arg Tyr Cys Gln Val Arg Cys	Ser Leu Gln Cys Val His	
260	265	270
Gly Arg Phe Arg Glu Glu Glu Cys Ser	Cys Val Cys Asp Ile Gly	
275	280	285
Tyr Gly Gly Ala Gln Cys Ala Thr Lys	Val His Phe Pro Phe His	
290	295	300
Thr Cys Asp Leu Arg Ile Asp Gly Asp	Cys Phe Met Val Ser Ser	
305	310	315
Glu Ala Asp Thr Tyr Tyr Arg Ala Arg	Met Lys Cys Gln Arg Lys	
320	325	330
Gly Gly Val Leu Ala Gln Ile Lys Ser	Gln Lys Val Gln Asp Ile	
335	340	345
Leu Ala Phe Tyr Leu Gly Arg Leu Glu	Thr Thr Asn Glu Val Thr	
350	355	360
Asp Ser Asp Phe Glu Thr Arg Asn Phe	Trp Ile Gly Leu Thr Tyr	
365	370	375
Lys Thr Ala Lys Asp Ser Phe Arg Trp	Ala Thr Gly Glu His Gln	
380	385	390
Ala Phe Thr Ser Phe Ala Phe Gly Gln	Pro Asp Asn His Gly Leu	
395	400	405

Val Trp Leu Ser Ala Ala Met Gly Phe Gly Asn Cys Val Glu Leu  
410 415 420

Gln Ala Ser Ala Ala Phe Asn Trp Asn Asp Gln Arg Cys Lys Thr  
425 430 435

Arg Asn Arg Tyr Ile Cys Gln Phe Ala Gln Glu His Ile Ser Arg  
440 445 450

Trp Gly Pro Gly Ser  
455

<210> 51  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 51  
aggaacttct ggatcgggct cacc 24

<210> 52  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 52  
gggtctgggc caggtggaag agag 24

<210> 53  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 53  
gccaaggact ccttcgctg ggccacaggg gagcaccagg ccttc 45

<210> 54  
<211> 2331  
<212> DNA  
<213> Homo Sapien

<400> 54  
cggacgcgtg ggctgggcgc tgcaaagcgt gtcccgcggt gtcccgcgagc 50  
gtcccgcgcc ctgcgccgc catgtctctg ctgtctgggc tgtgcctggg 100  
gctgtccctg tgtgtggggt cgcaggaaga ggcgcagagc tggggccact 150  
cttcggagca ggatggactc agggctccga ggcaagtcag actgttgcag 200



aggetgaaaa ccaaaccctt gatgacagaa ttctcagtga agtctaccat 250  
 catttcccgt tatgccttca ctacggtttc ctgcagaatg ctgaacagag 300  
 cttctgaaga ccaggacatt gagttccaga tgcagattcc agctgcagct 350  
 ttcatcacca acttcactat gcttattgga gacaagggtg atcagggcga 400  
 aattacagag agagaaaaga agagtgggtga tagggtaaaa gagaaaagga 450  
 ataaaaccac agaagaaaat ggagagaagg ggactgaaat attcagagct 500  
 tctgcagtga ttcccagcaa ggacaaagcc gcctttttcc tgagttatga 550  
 ggagcttctg cagaggcgcc tgggcaagta cgagcacagc atcagcgtgc 600  
 ggccccagca gctgtccggg aggetgagcg tggacgtgaa tatectggag 650  
 agcgcgggca tgcataccct ggaggtgctg ccgcttcaca acagcaggca 700  
 gaggggcagt gggcgcgggg aagatgattc tgggcctccc ccatctactg 750  
 tcattaacca aaatgaaaca ttgccaaca taatttttaa acctactgta 800  
 gtacaacaag ccaggattgc ccagaatgga attttgggag actttatcat 850  
 tagatatgac gtcaatagag aacagagcat tggggacatc caggttctaa 900  
 atggctatct tgtgcactac ttgtctcta aagaccttc tcttttacc 950  
 aagaatgtgg tattcgtgct tgacagcagt gcttctatgg tgggaacca 1000  
 actccggcag accaaggatg cctcttcac aattctccat gacctccgac 1050  
 cccaggaccg ttctcagtatc attggatttt ccaaccggat caaagtatgg 1100  
 aaggaccact tgatatcagt cactccagac agcatcaggg atgggaaagt 1150  
 gtacattcac catatgtcac ccactggagg cacagacatc aacggggccc 1200  
 tgcagagggc catcaggtc ctcaacaagt acgtggccca cagtggcatt 1250  
 ggagaccgga gcgtgtccct catcgtcttc ctgacggatg ggaagccac 1300  
 ggtcggggag acgcacaccc tcaagatcct caacaacacc cgagaggccg 1350  
 cccgaggcca agtctgcac ttaccattg gcacggcaa cgacgtggac 1400  
 ttcaggctgc tggagaaact gtcgctggag aactgtggcc tcacacggcg 1450  
 cgtgcacgag gaggaggacg caggctcgca gctcatcggg ttctacgatg 1500  
 aaatcaggac cccgtcctc tctgacatcc gcacgatta tccccccagc 1550  
 tcagtgggtg aggccacca gacctgttc cccaactact tcaacggctc 1600  
 ggagatcatc attgcgggga agctgggtgga caggaagctg gatcacctgc 1650

acgtggaggt caccgccagc aacagtaaga aattcatcat cctgaagaca 1700  
gatgtgcttg tgccggcctca gaaggcaggg aaagatgtca caggaagccc 1750  
caggcctgga ggcgatggag agggggacac caaccacatc gagcgtctct 1800  
ggagctacct caccacaaag gagctgctga gctcctgggt gcaaagtgc 1850  
gatgaaccgg agaaggagcg gctgcggcag cgggcccagg ccctggctgt 1900  
gagctaccgc ttctcactc ccttcacctc catgaagctg agggggcccg 1950  
tcccacgcat ggatggcctg gaggaggccc acggcatgtc ggctgccatg 2000  
ggacccgaac cggtggtgca gagcgtgcga ggagctggca cgcagccagg 2050  
acctttgtc aagaagccaa actccgtcaa aaaaaaacia aacaaaacia 2100  
aaaaagaca tgggagagat ggtgtttttc ctctccacca cctggggata 2150  
cgatgagaag atggccacct gcaagccagg aagacggccc tcaccagaca 2200  
ccatgtctgc tggcaccttg atcttgacc tccagcctc cagaactgtg 2250  
agaaataaat gtgttttgtt taagctaaaa aaaaaaaaaa aaaaaaaaaa 2300  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2331

<210> 55

<211> 694

<212> PRT

<213> Homo Sapien

<400> 55

Met	Leu	Leu	Leu	Leu	Gly	Leu	Cys	Leu	Gly	Leu	Ser	Leu	Cys	Val
1				5					10					15
Gly	Ser	Gln	Glu	Glu	Ala	Gln	Ser	Trp	Gly	His	Ser	Ser	Glu	Gln
			20						25					30
Asp	Gly	Leu	Arg	Val	Pro	Arg	Gln	Val	Arg	Leu	Leu	Gln	Arg	Leu
			35						40					45
Lys	Thr	Lys	Pro	Leu	Met	Thr	Glu	Phe	Ser	Val	Lys	Ser	Thr	Ile
			50						55					60
Ile	Ser	Arg	Tyr	Ala	Phe	Thr	Thr	Val	Ser	Cys	Arg	Met	Leu	Asn
			65						70					75
Arg	Ala	Ser	Glu	Asp	Gln	Asp	Ile	Glu	Phe	Gln	Met	Gln	Ile	Pro
			80						85					90
Ala	Ala	Ala	Phe	Ile	Thr	Asn	Phe	Thr	Met	Leu	Ile	Gly	Asp	Lys
			95						100					105
Val	Tyr	Gln	Gly	Glu	Ile	Thr	Glu	Arg	Glu	Lys	Lys	Ser	Gly	Asp
			110						115					120

00944834-033101

Arg Val Lys Glu	Lys Arg Asn Lys Thr	Thr Glu Glu Asn Gly Glu	125	130	135
Lys Gly Thr Glu	Ile Phe Arg Ala Ser	Ala Val Ile Pro Ser Lys	140	145	150
Asp Lys Ala Ala	Phe Phe Leu Ser Tyr	Glu Glu Leu Leu Gln Arg	155	160	165
Arg Leu Gly Lys	Tyr Glu His Ser Ile	Ser Val Arg Pro Gln Gln	170	175	180
Leu Ser Gly Arg	Leu Ser Val Asp Val	Asn Ile Leu Glu Ser Ala	185	190	195
Gly Ile Ala Ser	Leu Glu Val Leu Pro	Leu His Asn Ser Arg Gln	200	205	210
Arg Gly Ser Gly	Arg Gly Glu Asp Asp	Ser Gly Pro Pro Pro Ser	215	220	225
Thr Val Ile Asn	Gln Asn Glu Thr Phe	Ala Asn Ile Ile Phe Lys	230	235	240
Pro Thr Val Val	Gln Gln Ala Arg Ile	Ala Gln Asn Gly Ile Leu	245	250	255
Gly Asp Phe Ile	Ile Arg Tyr Asp Val	Asn Arg Glu Gln Ser Ile	260	265	270
Gly Asp Ile Gln	Val Leu Asn Gly Tyr	Phe Val His Tyr Phe Ala	275	280	285
Pro Lys Asp Leu	Pro Pro Leu Pro Lys	Asn Val Val Phe Val Leu	290	295	300
Asp Ser Ser Ala	Ser Met Val Gly Thr	Lys Leu Arg Gln Thr Lys	305	310	315
Asp Ala Leu Phe	Thr Ile Leu His Asp	Leu Arg Pro Gln Asp Arg	320	325	330
Phe Ser Ile Ile	Gly Phe Ser Asn Arg	Ile Lys Val Trp Lys Asp	335	340	345
His Leu Ile Ser	Val Thr Pro Asp Ser	Ile Arg Asp Gly Lys Val	350	355	360
Tyr Ile His His	Met Ser Pro Thr Gly	Gly Thr Asp Ile Asn Gly	365	370	375
Ala Leu Gln Arg	Ala Ile Arg Leu Leu	Asn Lys Tyr Val Ala His	380	385	390
Ser Gly Ile Gly	Asp Arg Ser Val Ser	Leu Ile Val Phe Leu Thr	395	400	405
Asp Gly Lys Pro	Thr Val Gly Glu Thr	His Thr Leu Lys Ile Leu			

00944824-083104

410	415	420
Asn Asn Thr Arg Glu Ala Ala Arg Gly	Gln Val Cys Ile Phe Thr	
425	430	435
Ile Gly Ile Gly Asn Asp Val Asp Phe	Arg Leu Leu Glu Lys Leu	
440	445	450
Ser Leu Glu Asn Cys Gly Leu Thr Arg	Arg Val His Glu Glu Glu	
455	460	465
Asp Ala Gly Ser Gln Leu Ile Gly Phe	Tyr Asp Glu Ile Arg Thr	
470	475	480
Pro Leu Leu Ser Asp Ile Arg Ile Asp	Tyr Pro Pro Ser Ser Val	
485	490	495
Val Gln Ala Thr Lys Thr Leu Phe Pro	Asn Tyr Phe Asn Gly Ser	
500	505	510
Glu Ile Ile Ile Ala Gly Lys Leu Val	Asp Arg Lys Leu Asp His	
515	520	525
Leu His Val Glu Val Thr Ala Ser Asn	Ser Lys Lys Phe Ile Ile	
530	535	540
Leu Lys Thr Asp Val Pro Val Arg Pro	Gln Lys Ala Gly Lys Asp	
545	550	555
Val Thr Gly Ser Pro Arg Pro Gly Gly	Asp Gly Glu Gly Asp Thr	
560	565	570
Asn His Ile Glu Arg Leu Trp Ser Tyr	Leu Thr Thr Lys Glu Leu	
575	580	585
Leu Ser Ser Trp Leu Gln Ser Asp Asp	Glu Pro Glu Lys Glu Arg	
590	595	600
Leu Arg Gln Arg Ala Gln Ala Leu Ala	Val Ser Tyr Arg Phe Leu	
605	610	615
Thr Pro Phe Thr Ser Met Lys Leu Arg	Gly Pro Val Pro Arg Met	
620	625	630
Asp Gly Leu Glu Glu Ala His Gly Met	Ser Ala Ala Met Gly Pro	
635	640	645
Glu Pro Val Val Gln Ser Val Arg Gly	Ala Gly Thr Gln Pro Gly	
650	655	660
Pro Leu Leu Lys Lys Pro Asn Ser Val	Lys Lys Lys Gln Asn Lys	
665	670	675
Thr Lys Lys Arg His Gly Arg Asp Gly	Val Phe Pro Leu His His	
680	685	690
Leu Gly Ile Arg		

<210> 56  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 56  
gtgggaacca aactccggca gacc 24

<210> 57  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 57  
cacatcgagc gtctctgg 18

<210> 58  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 58  
agccgctcct tctccggttc atcg 24

<210> 59  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 59  
tggaaggacc acttgatata agtcactcca gacagcatca gggatggg 48

<210> 60  
<211> 1413  
<212> DNA  
<213> Homo Sapien

<400> 60  
cggacgcgtg gggtgccga catggcgagt gtagtgctgc cgagcggatc 50  
ccagtgtgcg gcggcagcgg cgggcggcgg gctcccggg ctccggcttc 100  
tgctgttgct cttctccgcc gcggcactga tccccacagg tgatgggcag 150  
aatctgttta cgaaagacgt gacagtgatc gagggagagg ttgcgaccat 200

00944834-083101

cagttgccaa gtcaataaga gtgacgactc tgtgattcag ctactgaatc 250  
ccaacaggca gaccatttat ttcagggact tcaggccttt gaaggacagc 300  
aggtttcagt tgctgaattt ttctagcagt gaactcaaag tatcattgac 350  
aaacgtctca atttctgatg aaggaagata cttttgccag ctctataaccg 400  
atccccaca ggaaagttac accaccatca cagtcctggg cccaccacgt 450  
aatctgatga tcgatatcca gaaagacact gcggtggaag gtgaggagat 500  
tgaagtcaac tgcactgcta tggccagcaa gccagccacg actatcaggt 550  
ggttcaaagg gaacacagag ctaaaaggca aatcggaggt ggaagagtgg 600  
tcagacatgt aactgtgac cagtcagctg atgctgaagg tgcacaagga 650  
ggacgatggg gtcccagtga tctgccaggt ggagcacccct gcggtcactg 700  
gaaacctgca gaccagcgg tatctagaag tacagtataa gcctcaagtg 750  
cacattcaga tgacttatcc tctacaaggc ttaaccggg aaggggacgc 800  
gcttgagtta acatgtgaag ccatcgggaa gcccagcct gtgatggtaa 850  
cttgggtgag agtcgatgat gaaatgcctc aacacgccgt actgtctggg 900  
cccaacctgt tcatcaataa cctaaacaaa acagataatg gtacataaccg 950  
ctgtgaagct tcaaacatag tggggaaagc tcaactcgat tatatgctgt 1000  
atgtatacga tccccccaca actatccctc ctcccacaac aaccaccacc 1050  
accaccacca ccaccaccac caccatcctt accatcatca cagattcccg 1100  
agcaggtgaa gaaggctcga tcagggcagt ggatcatgcc gtgatcggtg 1150  
gcgtcgtggc ggtggtggtg ttcgccatgc tgtgcttgct catcattctg 1200  
gggcgctatt ttgccagaca taaaggtaca tacttcactc atgaagccaa 1250  
aggagccgat gacgcagcag acgcagacac agctataatc aatgcagaag 1300  
gaggacagaa caactccgaa gaaaagaaag agtacttcat ctagatcagc 1350  
ctttttgttt caatgaggtg tccaactggc cctattttaga tgataaagag 1400  
acagtgatat tgg 1413

<210> 61  
<211> 440  
<212> PRT  
<213> Homo Sapien

<400> 61  
Met Ala Ser Val Val Leu Pro Ser Gly Ser Gln Cys Ala Ala Ala  
1 5 10 15

03044884-083101

Ala	Ala	Ala	Ala	Ala	Pro	Pro	Gly	Leu	Arg	Leu	Leu	Leu	Leu	Leu		20	25	30
Phe	Ser	Ala	Ala	Ala	Leu	Ile	Pro	Thr	Gly	Asp	Gly	Gln	Asn	Leu		35	40	45
Phe	Thr	Lys	Asp	Val	Thr	Val	Ile	Glu	Gly	Glu	Val	Ala	Thr	Ile		50	55	60
Ser	Cys	Gln	Val	Asn	Lys	Ser	Asp	Asp	Ser	Val	Ile	Gln	Leu	Leu		65	70	75
Asn	Pro	Asn	Arg	Gln	Thr	Ile	Tyr	Phe	Arg	Asp	Phe	Arg	Pro	Leu		80	85	90
Lys	Asp	Ser	Arg	Phe	Gln	Leu	Leu	Asn	Phe	Ser	Ser	Ser	Glu	Leu		95	100	105
Lys	Val	Ser	Leu	Thr	Asn	Val	Ser	Ile	Ser	Asp	Glu	Gly	Arg	Tyr		110	115	120
Phe	Cys	Gln	Leu	Tyr	Thr	Asp	Pro	Pro	Gln	Glu	Ser	Tyr	Thr	Thr		125	130	135
Ile	Thr	Val	Leu	Val	Pro	Pro	Arg	Asn	Leu	Met	Ile	Asp	Ile	Gln		140	145	150
Lys	Asp	Thr	Ala	Val	Glu	Gly	Glu	Glu	Ile	Glu	Val	Asn	Cys	Thr		155	160	165
Ala	Met	Ala	Ser	Lys	Pro	Ala	Thr	Thr	Ile	Arg	Trp	Phe	Lys	Gly		170	175	180
Asn	Thr	Glu	Leu	Lys	Gly	Lys	Ser	Glu	Val	Glu	Glu	Trp	Ser	Asp		185	190	195
Met	Tyr	Thr	Val	Thr	Ser	Gln	Leu	Met	Leu	Lys	Val	His	Lys	Glu		200	205	210
Asp	Asp	Gly	Val	Pro	Val	Ile	Cys	Gln	Val	Glu	His	Pro	Ala	Val		215	220	225
Thr	Gly	Asn	Leu	Gln	Thr	Gln	Arg	Tyr	Leu	Glu	Val	Gln	Tyr	Lys		230	235	240
Pro	Gln	Val	His	Ile	Gln	Met	Thr	Tyr	Pro	Leu	Gln	Gly	Leu	Thr		245	250	255
Arg	Glu	Gly	Asp	Ala	Leu	Glu	Leu	Thr	Cys	Glu	Ala	Ile	Gly	Lys		260	265	270
Pro	Gln	Pro	Val	Met	Val	Thr	Trp	Val	Arg	Val	Asp	Asp	Glu	Met		275	280	285
Pro	Gln	His	Ala	Val	Leu	Ser	Gly	Pro	Asn	Leu	Phe	Ile	Asn	Asn		290	295	300
Leu	Asn	Lys	Thr	Asp	Asn	Gly	Thr	Tyr	Arg	Cys	Glu	Ala	Ser	Asn				

305	310	315
Ile Val Gly Lys Ala His Ser Asp Tyr Met Leu Tyr Val Tyr Asp		
320	325	330
Pro Pro Thr Thr Ile Pro Pro Pro Thr Thr Thr Thr Thr Thr		
335	340	345
Thr Thr Thr Thr Thr Thr Ile Leu Thr Ile Ile Thr Asp Ser Arg		
350	355	360
Ala Gly Glu Glu Gly Ser Ile Arg Ala Val Asp His Ala Val Ile		
365	370	375
Gly Gly Val Val Ala Val Val Val Phe Ala Met Leu Cys Leu Leu		
380	385	390
Ile Ile Leu Gly Arg Tyr Phe Ala Arg His Lys Gly Thr Tyr Phe		
395	400	405
Thr His Glu Ala Lys Gly Ala Asp Asp Ala Ala Asp Ala Asp Thr		
410	415	420
Ala Ile Ile Asn Ala Glu Gly Gly Gln Asn Asn Ser Glu Glu Lys		
425	430	435
Lys Glu Tyr Phe Ile		
440		

<210> 62  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 62  
 ggcttctgct gttgctcttc tccg 24  
  
 <210> 63  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 63  
 gtacactgtg accagtcagc 20  
  
 <210> 64  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe



<400> 64  
atcatcacag attcccgagc 20

<210> 65  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 65  
ttcaatctcc tcaccttcca ccgc 24

<210> 66  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 66  
atagctgtgt ctgcgtctgc tgcg 24

<210> 67  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 67  
cgcggcactg atccccacag gtgatgggca gaatctgttt acgaaagacg 50

<210> 68  
<211> 2555  
<212> DNA  
<213> Homo Sapien

<400> 68  
ggggcggggtg gacgcggact cgaacgcagt tgcttcggga cccaggaccc 50  
cctcgggccc gaccgcag gaaagactga ggccgcggcc tgccccgccc 100  
ggctccctgc gccgcgccg cctcccgga cagaagatgt gctccagggt 150  
ccctctgctg ctgccgtgc tctgctact ggccctgggg cctgggggtgc 200  
agggctgccc atccggctgc cagtgcagcc agccacagac agtcttctgc 250  
actgcccgcc aggggaccac ggtgccccga gacgtgccac ccgacacggt 300  
ggggctgtac gtctttgaga acggcatcac catgctcgac gcaagcagct 350  
ttgccggcct gccgggcctg cagctcctgg acctgtcaca gaaccagatc 400

gccagcctgc gcctgccccg cctgctgctg ctggacctca gccacaacag 450  
cctcctggcc ctggagcccc gcatacctgga cactgccaac gtggaggcgc 500  
tgcggctggc tggctctgggg ctgcagcagc tggacgaggg gctcttcagc 550  
cgcttgcgca acctccacga cctggatgtg tccgacaacc agctggagcg 600  
agtgccacct gtgatccgag gcctccgggg cctgacgcgc ctgcggtctg 650  
ccggcaacac ccgcattgcc cagctgcggc ccgaggacct ggccggcctg 700  
gctgccctgc aggagctgga tgtgagcaac ctaagcctgc aggcctgcc 750  
tggcgacctc tcgggcctct tccccgcct gcggtgctg gcagctgcc 800  
gcaaccctt caactgcgtg tgccccctga gctggtttg cccctgggtg 850  
cgcgagagcc acgtcacact ggccagcct gaggagacgc gctgccactt 900  
cccgcccaag aacgctggcc ggctgctcct ggagcttgac tacgccgact 950  
ttggctgccc agccaccacc accacagcca cagtgccac cagaggccc 1000  
gtggtgcggg agcccacagc cttgtcttct agcttggtc ctacctggt 1050  
tagccccaca gcgccggcca ctgaggcccc cagcccgccc tccactgcc 1100  
caccgactgt agggcctgtc cccagcccc aggactgcc accgtccacc 1150  
tgcctcaatg ggggcacatg ccacctgggg acacggcacc acctggcggtg 1200  
cttgtgcccc gaaggcttca cgggcctgta ctgtgagagc cagatggggc 1250  
aggggacacg gccagccct acaccagtca cgccgaggcc accacgggtc 1300  
ctgaccctgg gcatacgagc ggtgagcccc acctccctgc gcgtggggct 1350  
gcagcgctac ctccagggga gctccgtgca gctcaggagc ctccgtctca 1400  
cctatcgcaa cctatcgggc cctgataagc ggctggtgac gctgcgactg 1450  
cctgcctcgc tcgctgagta cacggtcacc cagctgcggc ccaacgccac 1500  
ttactccgtc tgtgtcatgc ctttggggcc cgggcgggtg ccggagggcg 1550  
aggaggcctg cggggaggcc catacaccac cagccgtcca ctccaaccac 1600  
gccccagtca cccaggcccc cgagggaac ctgccgctcc tcattgcgcc 1650  
cgccctggcc gcggtgctcc tggccgcgct ggctgcgggtg ggggcagcct 1700  
actgtgtgcg gcgggggcgg gccatggcag cagcggctca ggacaaagg 1750  
caggtggggc caggggctgg gccctggaa ctggaggag tgaaggctcc 1800  
cttgagacca ggcccgaagg caacagagg cggtggagag gccctgcca 1850

094484-084650

gcgggtctga gtgtgaggtg ccactcatgg gcttcccagg gcctggcctc 1900  
 cagtcacccc tccacgcaaa gccctacatc taagccagag agagacaggg 1950  
 cagctggggc cgggctctca gccagtgaga tggccagccc cctcctgctg 2000  
 ccacaccacg taagttctca gtcccaacct cggggatgtg tgcagacagg 2050  
 gctgtgtgac cacagctggg ccctgttccc tctggacctc ggtctcctca 2100  
 tctgtgagat gctgtggccc agctgacgag ccctaacgtc cccagaaccg 2150  
 agtgccatg aggacagtgt ccgccctgcc ctccgcaacg tgcagtcctc 2200  
 gggcacggcg ggccctgcca tgtgctggta acgcatgcct gggccctgct 2250  
 gggctctccc actccaggcg gaccctgggg gccagtgaag gaagctcccg 2300  
 gaaagagcag agggagagcg ggtaggcggc tgtgtgactc tagtcttggc 2350  
 cccaggaagc gaaggaacaa aagaaactgg aaaggaagat gctttaggaa 2400  
 catgttttgc ttttttaaaa tatatatata tttataagag atcctttccc 2450  
 atttattctg ggaagatggt tttcaaactc agagacaagg actttgggtt 2500  
 ttgtaagaca aacgatgata tgaaggcctt ttgtaagaaa aaataaaaaa 2550  
 aaaaa 2555

<210> 69  
 <211> 598  
 <212> PRT  
 <213> Homo Sapien

<400> 69  
 Met Cys Ser Arg Val Pro Leu Leu Leu Pro Leu Leu Leu Leu Leu  
 1 5 10 15  
 Ala Leu Gly Pro Gly Val Gln Gly Cys Pro Ser Gly Cys Gln Cys  
 20 25 30  
 Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr  
 35 40 45  
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe  
 50 55 60  
 Glu Asn Gly Ile Thr Met Leu Asp Ala Ser Ser Phe Ala Gly Leu  
 65 70 75  
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser  
 80 85 90  
 Leu Arg Leu Pro Arg Leu Leu Leu Leu Asp Leu Ser His Asn Ser  
 95 100 105  
 Leu Leu Ala Leu Glu Pro Gly Ile Leu Asp Thr Ala Asn Val Glu

094384-033104

110	115	120
Ala Leu Arg Leu	Ala Gly Leu Gly Leu Gln Gln Leu Asp Glu Gly	
125	130	135
Leu Phe Ser Arg	Leu Arg Asn Leu His Asp Leu Asp Val Ser Asp	
140	145	150
Asn Gln Leu Glu	Arg Val Pro Pro Val Ile Arg Gly Leu Arg Gly	
155	160	165
Leu Thr Arg Leu	Arg Leu Ala Gly Asn Thr Arg Ile Ala Gln Leu	
170	175	180
Arg Pro Glu Asp	Leu Ala Gly Leu Ala Ala Leu Gln Glu Leu Asp	
185	190	195
Val Ser Asn Leu	Ser Leu Gln Ala Leu Pro Gly Asp Leu Ser Gly	
200	205	210
Leu Phe Pro Arg	Leu Arg Leu Leu Ala Ala Ala Arg Asn Pro Phe	
215	220	225
Asn Cys Val Cys	Pro Leu Ser Trp Phe Gly Pro Trp Val Arg Glu	
230	235	240
Ser His Val Thr	Leu Ala Ser Pro Glu Glu Thr Arg Cys His Phe	
245	250	255
Pro Pro Lys Asn	Ala Gly Arg Leu Leu Leu Glu Leu Asp Tyr Ala	
260	265	270
Asp Phe Gly Cys	Pro Ala Thr Thr Thr Thr Ala Thr Val Pro Thr	
275	280	285
Thr Arg Pro Val	Val Arg Glu Pro Thr Ala Leu Ser Ser Ser Leu	
290	295	300
Ala Pro Thr Trp	Leu Ser Pro Thr Ala Pro Ala Thr Glu Ala Pro	
305	310	315
Ser Pro Pro Ser	Thr Ala Pro Pro Thr Val Gly Pro Val Pro Gln	
320	325	330
Pro Gln Asp Cys	Pro Pro Ser Thr Cys Leu Asn Gly Gly Thr Cys	
335	340	345
His Leu Gly Thr	Arg His His Leu Ala Cys Leu Cys Pro Glu Gly	
350	355	360
Phe Thr Gly Leu	Tyr Cys Glu Ser Gln Met Gly Gln Gly Thr Arg	
365	370	375
Pro Ser Pro Thr	Pro Val Thr Pro Arg Pro Pro Arg Ser Leu Thr	
380	385	390
Leu Gly Ile Glu	Pro Val Ser Pro Thr Ser Leu Arg Val Gly Leu	
395	400	405

Gln Arg Tyr Leu	Gln Gly Ser Ser Val	Gln Leu Arg Ser Leu Arg
410		420
Leu Thr Tyr Arg	Asn Leu Ser Gly Pro Asp Lys Arg Leu Val Thr	
425		435
Leu Arg Leu Pro	Ala Ser Leu Ala Glu Tyr Thr Val Thr Gln Leu	
440		450
Arg Pro Asn Ala	Thr Tyr Ser Val Cys Val Met Pro Leu Gly Pro	
455		465
Gly Arg Val Pro	Glu Gly Glu Glu Ala Cys Gly Glu Ala His Thr	
470		480
Pro Pro Ala Val	His Ser Asn His Ala Pro Val Thr Gln Ala Arg	
485		495
Glu Gly Asn Leu	Pro Leu Leu Ile Ala Pro Ala Leu Ala Ala Val	
500		510
Leu Leu Ala Ala	Leu Ala Ala Val Gly Ala Ala Tyr Cys Val Arg	
515		525
Arg Gly Arg Ala	Met Ala Ala Ala Ala Gln Asp Lys Gly Gln Val	
530		540
Gly Pro Gly Ala	Gly Pro Leu Glu Leu Glu Gly Val Lys Val Pro	
545		555
Leu Glu Pro Gly	Pro Lys Ala Thr Glu Gly Gly Gly Glu Ala Leu	
560		570
Pro Ser Gly Ser	Glu Cys Glu Val Pro Leu Met Gly Phe Pro Gly	
575		585
Pro Gly Leu Gln	Ser Pro Leu His Ala Lys Pro Tyr Ile	
590		595

<210> 70

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

ccctccactg cccaccgac tg 22

<210> 71

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71  
cggttctggg gacgttaggg ctcg 24

<210> 72  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 72  
ctgcccaccg tccacctgcc tcaat 25

<210> 73  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 73  
aggactgccc accgtccacc tgcctcaatg ggggcacatg ccacc 45

<210> 74  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide Probe

<400> 74  
acgcaaagcc ctacatctaa gccagagaga gacagggcag ctggg 45

<210> 75  
<211> 1077  
<212> DNA  
<213> Homo Sapien

<400> 75  
ggcactagga caaccttctt cctttctgca ccaactgccc tacccttacc 50  
cgccccgcca cctccttgct accccactct tgaaaccaca gctgttggca 100  
gggtccccag ctcatgccag cctcatctcc tttcttgcta gcccccaaag 150  
ggcctccagg caacatgggg ggcccagtc gagagccggc actctcagtt 200  
gccctctggt tgagttgggg ggcagctctg ggggcccgtg cttgtgccat 250  
ggctctgctg acccaacaaa cagagctgca gagcctcagg agagaggtga 300  
gccggctgca ggggacagga ggcccctccc agaatgggga agggatatcc 350  
tggcagagtc tcccggagca gagttccgat gccctggaag cctgggagaa 400



Val	Pro	Ile	Asn	Ala	Thr	Ser	Lys	Asp	Asp	Ser	Asp	Val	Thr	Glu	125	130	135
Val	Met	Trp	Gln	Pro	Ala	Leu	Arg	Arg	Gly	Arg	Gly	Leu	Gln	Ala	140	145	150
Gln	Gly	Tyr	Gly	Val	Arg	Ile	Gln	Asp	Ala	Gly	Val	Tyr	Leu	Leu	155	160	165
Tyr	Ser	Gln	Val	Leu	Phe	Gln	Asp	Val	Thr	Phe	Thr	Met	Gly	Gln	170	175	180
Val	Val	Ser	Arg	Glu	Gly	Gln	Gly	Arg	Gln	Glu	Thr	Leu	Phe	Arg	185	190	195
Cys	Ile	Arg	Ser	Met	Pro	Ser	His	Pro	Asp	Arg	Ala	Tyr	Asn	Ser	200	205	210
Cys	Tyr	Ser	Ala	Gly	Val	Phe	His	Leu	His	Gln	Gly	Asp	Ile	Leu	215	220	225
Ser	Val	Ile	Ile	Pro	Arg	Ala	Arg	Ala	Lys	Leu	Asn	Leu	Ser	Pro	230	235	240
His	Gly	Thr	Phe	Leu	Gly	Phe	Val	Lys	Leu						245	250	

<210> 77  
 <211> 2849  
 <212> DNA  
 <213> Homo Sapien

<400> 77  
 cacttttctcc ctctcttctct ttacttttcga gaaaccgcgc ttccgcttct 50  
 ggtcgcagag acctcggaga ccgcgccggg gagacggagg tgctgtgggt 100  
 ggggggggacc tgtggctgct cgtaccgccc cccaccctcc tcttctgcac 150  
 tgccgtcttc cggaagacct ttccctctgc tctgtttctc tcaccgagtc 200  
 tgtgcatcgc cccggacctg gccgggagga ggcttggccg gcgggagatg 250  
 ctctaggggc ggcgcgggag gagcggccgg cgggacggag ggcccggcag 300  
 gaagatgggc tcccgtggac agggactctt gctggcgtag tgcttgcctc 350  
 ttgcctttgc ctctggcctg gtcttgagtc gtgtgcccc tgtccagggg 400  
 gaacagcagg agtgggaggg gactgaggag ctgccgtcgc ctccggacca 450  
 tgccgagagg gctgaagaac aacatgaaaa atacaggccc agtcaggacc 500  
 aggggctccc tgcttcccgg tgcttgcgct gctgtgaccc cggtaacctc 550  
 atgtaccggc cgaccgccgt gcccagatc aacatcacta tcttgaaagg 600  
 ggagaagggt gaccgcggag atcgaggcct ccaagggaaa tatggcaaaa 650

05944384-033101



caggctcagc agggggccagg ggccacactg gacccaaagg gcagaagggc 700  
 tccatggggg cccctgggga gcggtgcaag agccactacg ccgccttttc 750  
 ggtggggccg aagaagccca tgcacagcaa ccactactac cagacggtga 800  
 tcttcgacac ggagttcgtg aacctctacg accacttcaa catgttcacc 850  
 ggcaagttct actgctacgt gcccggcctc tactttctca gcctcaacgt 900  
 gcacacctgg aaccagaagg agacctacct gcacatcatg aagaacgagg 950  
 aggaggtggt gatcttggtc ggcgaggtgg ggcaccgcag catcatgcaa 1000  
 agccagagcc tgatgctgga gctgagagag caggaccagg tgtgggtacg 1050  
 cctctacaag gggaacgtg agaacgccat cttcagcgag gagctggaca 1100  
 cctacatcac cttcagtggc tacctgggtc agcacgccac cgagccctag 1150  
 ctggccggcc acctcctttc ctctcgccac cttccacccc tgcgctgtgc 1200  
 tgacccacc gcctcttccc cgatccctgg actccgactc cctggctttg 1250  
 gcattcagtg agacgcctg cacacacaga aagccaaagg gatcggtgct 1300  
 cccagatccc gcagcctctg gagagagctg acggcagatg aaatcaccag 1350  
 ggcggggcac ccgcgagaac cctctgggac cttccgcggc cctctctgca 1400  
 cacatcctca agtgaccccg cacggcgaga cgcgggtggc ggcagggcgt 1450  
 cccaggggtgc ggcaccgcgg ctccagtcct tggaaataat taggcaaatt 1500  
 ctaaaggtct caaaaggagc aaagtaaacc gtggaggaca aagaaaaggg 1550  
 ttgttatttt tgtctttcca gccagcctgc tggctcccaa gagagaggcc 1600  
 ttttcagttg agactctgct taagagaaga tccaaagtta aagctctggg 1650  
 gtcaggggag gggccggggg caggaaacta cctctggctt aattctttta 1700  
 agccacgtag gaactttctt gagggatagg tggaccctga catccctgtg 1750  
 gccttgccca agggctctgc tggcttttct gagtcacagc tgcgaggtga 1800  
 tgggggctgg ggccccaggc gtcagcctcc cagagggaca gctgagcccc 1850  
 ctgccttggc tccaggttgg tagaagcagc cgaagggtc ctgacagtgg 1900  
 ccagggacct ctgggtcccc caggcctgca gatgtttcta tgaggggcag 1950  
 agctccttgg tacatccatg tgtggctctg ctccaccct gtgccacccc 2000  
 agagccctgg ggggtggtct ccatgcctgc caccctggca tcggctttct 2050  
 gtgccgcctc ccacacaaat cagccccaga agggcccggg gccttggtt 2100

ctgtttttta taaaacacct caagcagcac tgcagtctcc catctcctcg 2150  
 tgggctaage atcaccgctt ccacgtgtgt tgtgttggtt ggcagcaagg 2200  
 ctgatccaga ccccttctgc ccccaactgcc ctcatccagg cctctgacca 2250  
 gtagcctgag aggggctttt tctaggcttc agagcagggg agagctggaa 2300  
 ggggctagaa agctcccgt tgtctgtttc tcaggctcct gtgagcctca 2350  
 gtcttgagac cagagtcaag aggaagtaca cgtcccaatc acccgtgtca 2400  
 ggattcactc tcaggagctg ggtggcagga gaggcaatag cccctgtggc 2450  
 aattgcagga ccagctggag cagggttgcg gtgtctccac ggtgctctcg 2500  
 cctgccccat ggccacccca gactctgac tccaggaacc ccatagcccc 2550  
 tctccacctc acccatggt gatgccagg gtcactcttg ctaccgctg 2600  
 ggccccaaa ccccgcgtgc ctctcttct tccccccatc ccccaactgg 2650  
 ttttgactaa tctgtcttc ctctctgggc ctggctgccg ggatctgggg 2700  
 tccctaagtc cctctcttta aagaacttct gggggtcaga ctctgaagcc 2750  
 gagttgctgt gggcgtgcc ggaagcagag cgccacactc gctgcttaag 2800  
 ctccccagc tctttccaga aacattaaa ctccagaattg tgttttcaa 2849

<210> 78  
 <211> 281  
 <212> PRT  
 <213> Homo Sapien

<400> 78  
 Met Gly Ser Arg Gly Gln Gly Leu Leu Leu Ala Tyr Cys Leu Leu  
 1 5 10 15  
 Leu Ala Phe Ala Ser Gly Leu Val Leu Ser Arg Val Pro His Val  
 20 25 30  
 Gln Gly Glu Gln Gln Glu Trp Glu Gly Thr Glu Glu Leu Pro Ser  
 35 40 45  
 Pro Pro Asp His Ala Glu Arg Ala Glu Glu Gln His Glu Lys Tyr  
 50 55 60  
 Arg Pro Ser Gln Asp Gln Gly Leu Pro Ala Ser Arg Cys Leu Arg  
 65 70 75  
 Cys Cys Asp Pro Gly Thr Ser Met Tyr Pro Ala Thr Ala Val Pro  
 80 85 90  
 Gln Ile Asn Ile Thr Ile Leu Lys Gly Glu Lys Gly Asp Arg Gly  
 95 100 105  
 Asp Arg Gly Leu Gln Gly Lys Tyr Gly Lys Thr Gly Ser Ala Gly

110	115	120
Ala Arg Gly His Thr Gly Pro Lys Gly	Gln Lys Gly Ser Met Gly	
125	130	135
Ala Pro Gly Glu Arg Cys Lys Ser His	Tyr Ala Ala Phe Ser Val	
140	145	150
Gly Arg Lys Lys Pro Met His Ser Asn	His Tyr Tyr Gln Thr Val	
155	160	165
Ile Phe Asp Thr Glu Phe Val Asn Leu	Tyr Asp His Phe Asn Met	
170	175	180
Phe Thr Gly Lys Phe Tyr Cys Tyr Val	Pro Gly Leu Tyr Phe Phe	
185	190	195
Ser Leu Asn Val His Thr Trp Asn Gln	Lys Glu Thr Tyr Leu His	
200	205	210
Ile Met Lys Asn Glu Glu Glu Val Val	Ile Leu Phe Ala Gln Val	
215	220	225
Gly Asp Arg Ser Ile Met Gln Ser Gln	Ser Leu Met Leu Glu Leu	
230	235	240
Arg Glu Gln Asp Gln Val Trp Val Arg	Leu Tyr Lys Gly Glu Arg	
245	250	255
Glu Asn Ala Ile Phe Ser Glu Glu Leu	Asp Thr Tyr Ile Thr Phe	
260	265	270
Ser Gly Tyr Leu Val Lys His Ala Thr	Glu Pro	
275	280	

<210> 79  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe

<400> 79  
 tacaggccca gtcaggacca gggg 24

<210> 80  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 80  
 ctgaagaagt agaggccggg cacg 24

<210> 81

<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 81  
cccgggtgctt gcgctgctgt gaccccggtg cctccatgta cccgg 45

<210> 82  
<211> 2284  
<212> DNA  
<213> Homo Sapien

<400> 82  
gcggagcatc cgctgcggtc ctgcgcgaga ccccgcgcg gattcgccgg 50  
tccttccgcg gggcgcgaca gagctgtcct cgcacctgga tggcagcagg 100  
ggcgccgggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150  
cttcttaaag caaactaaga ccagagggag gattatcctt gacctttgaa 200  
gacaaaaact aaactgaaat ttaaaatgtt cttcggggga gaaggagct 250  
tgacttacac tttggtaata atttgcttcc tgacactaag gctgtctgct 300  
agtcagaatt gcctcaaaaa gagtctagaa gatgttgtca ttgacatcca 350  
gtcatctctt tctaaggga tcaagaggaa tgagcccgta tatacttcaa 400  
ctcaagaaga ctgcattaat tcttgctgtt caacaaaaaa catatcaggg 450  
gacaaagcat gtaacttgat gatcttcgac actcgaaaaa cagctagaca 500  
acccaactgc tacctatctt tctgtcccaa cgaggaagcc tgtccattga 550  
aaccagcaaa aggacttatg agttacagga taattacaga ttttccatct 600  
ttgaccagaa atttgccaag ccaagagtta cccaggaag attctctctt 650  
acatggccaa ttttcacaag cagtcactcc cctagcccat catcacacag 700  
attattcaaa gccaccgat atctcatgga gagacacact ttctcagaag 750  
tttggtacct cagatcacct ggagaaacta ttttaagatgg atgaagcaag 800  
tgcccagctc cttgcttata aggaaaaagg ccattctcag agttcacaat 850  
tttcctctga tcaagaaata gctcatctgc tgccctgaaa tgtgagtgcg 900  
ctcccagcta cgggtggcagt tgcttctcca cataccacct cggctactcc 950  
aaagcccgcc acccttctac ccaccaatgc ttcagtgaca ccttctggga 1000  
cttcccagcc acagctggcc accacagctc cacctgtaac cactgtcact 1050

09944884-033101

0944534-03101

tctcagcctc ccacgacctt catttctaca gtttttacac gggctgcggc 1100  
 tacactccaa gcaatggcta caacagcagt tctgactacc acctttcagg 1150  
 cacctacgga ctcgaaaggc agcttagaaa ccataccggtt tacagaaatc 1200  
 tccaacttaa ctttgaacac agggaatgtg tataacccta ctgcactttc 1250  
 tatgtcaaat gtggagtctt ccactatgaa taaaactgct tcctgggaag 1300  
 gtagggaggc cagtcaggc agttcctccc agggcagtg tccagaaaat 1350  
 cagtacggcc ttccatttga aaaatggctt cttatcgggt cctgctctt 1400  
 tgggtgctctg ttctggtga taggcctcgt cctcctgggt agaatccttt 1450  
 cggaatcact ccgcaggaaa cgttactcaa gactggatta tttgatcaat 1500  
 gggatctatg tggacatcta aggatggaac tcgggtgtctc ttaattcatt 1550  
 tagtaaccag aagcccaaat gcaatgagtt tctgctgact tgctagtctt 1600  
 agcaggaggt tgtattttga agacaggaaa atgccccctt ctgctttcct 1650  
 tttttttttt ggagacagag tcttgtctctg ttgcccaggc tggagtgcag 1700  
 tagcacgata tcggctctca ccgcaacctc cgtctcctgg gttcaagcga 1750  
 ttctcctgcc tcagcctcct aagtatctgg gattacaggc atgtgccacc 1800  
 acacctgggt gattttttgta ttttttagtag agacgggggtt tcaccatggt 1850  
 ggtcaggctg gtctcaaact cctgacctag tgateccacc tcctcggcct 1900  
 cccaaagtgc tgggattaca ggcatgagcc accacagctg gcccccttct 1950  
 gttttatgtt tggtttttga gaaggaatga agtgggaacc aaattaggta 2000  
 attttgggta atctgtctct aaaatattag ctaaaaacaa agctctatgt 2050  
 aaagtaataa agtataattg ccatataaat ttcaaaatc aactggcttt 2100  
 tatgcaaaga aacagggttag gacatctagg ttccaattca ttcacattct 2150  
 tggttccaga taaaatcaac tgtttatata aatttctaata ggatttgctt 2200  
 ttctttttat atggattcct ttaaaactta ttccagatgt agttccttcc 2250  
 aattaaatat ttgaataaat cttttgttac tcaa 2284

<210> 83  
 <211> 431  
 <212> PRT  
 <213> Homo Sapien

<400> 83  
 Met Phe Phe Gly Gly Glu Gly Ser Leu Thr Tyr Thr Leu Val Ile  
 1 5 10 15

099484-03101

Ile Cys Phe Leu Thr	Leu Arg Leu Ser	Ala Ser Gln Asn Cys	Leu
20	25		30
Lys Lys Ser Leu Glu	Asp Val Val Ile	Asp Ile Gln Ser Ser	Leu
35	40		45
Ser Lys Gly Ile Arg	Gly Asn Glu Pro	Val Tyr Thr Ser Thr	Gln
50	55		60
Glu Asp Cys Ile Asn	Ser Cys Cys Ser	Thr Lys Asn Ile Ser	Gly
65	70		75
Asp Lys Ala Cys Asn	Leu Met Ile Phe	Asp Thr Arg Lys Thr	Ala
80	85		90
Arg Gln Pro Asn Cys	Tyr Leu Phe Phe	Cys Pro Asn Glu Glu	Ala
95	100		105
Cys Pro Leu Lys Pro	Ala Lys Gly Leu	Met Ser Tyr Arg Ile	Ile
110	115		120
Thr Asp Phe Pro Ser	Leu Thr Arg Asn	Leu Pro Ser Gln Glu	Leu
125	130		135
Pro Gln Glu Asp Ser	Leu Leu His Gly	Gln Phe Ser Gln Ala	Val
140	145		150
Thr Pro Leu Ala His	His His Thr Asp	Tyr Ser Lys Pro Thr	Asp
155	160		165
Ile Ser Trp Arg Asp	Thr Leu Ser Gln	Lys Phe Gly Ser Ser	Asp
170	175		180
His Leu Glu Lys Leu	Phe Lys Met Asp	Glu Ala Ser Ala Gln	Leu
185	190		195
Leu Ala Tyr Lys Glu	Lys Gly His Ser	Gln Ser Ser Gln Phe	Ser
200	205		210
Ser Asp Gln Glu Ile	Ala His Leu Leu	Pro Glu Asn Val Ser	Ala
215	220		225
Leu Pro Ala Thr Val	Ala Val Ala Ser	Pro His Thr Thr Ser	Ala
230	235		240
Thr Pro Lys Pro Ala	Thr Leu Leu Pro	Thr Asn Ala Ser Val	Thr
245	250		255
Pro Ser Gly Thr Ser	Gln Pro Gln Leu	Ala Thr Thr Ala Pro	Pro
260	265		270
Val Thr Thr Val Thr	Ser Gln Pro Pro	Thr Thr Leu Ile Ser	Thr
275	280		285
Val Phe Thr Arg Ala	Ala Ala Ala Thr	Leu Gln Ala Met Ala	Thr
290	295		300
Ala Val Leu Thr Thr	Thr Phe Gln Ala	Pro Thr Asp Ser Lys	Gly

305	310	315
Ser Leu Glu Thr Ile Pro Phe Thr Glu Ile Ser Asn Leu Thr Leu		
320	325	330
Asn Thr Gly Asn Val Tyr Asn Pro Thr Ala Leu Ser Met Ser Asn		
335	340	345
Val Glu Ser Ser Thr Met Asn Lys Thr Ala Ser Trp Glu Gly Arg		
350	355	360
Glu Ala Ser Pro Gly Ser Ser Ser Gln Gly Ser Val Pro Glu Asn		
365	370	375
Gln Tyr Gly Leu Pro Phe Glu Lys Trp Leu Leu Ile Gly Ser Leu		
380	385	390
Leu Phe Gly Val Leu Phe Leu Val Ile Gly Leu Val Leu Leu Gly		
395	400	405
Arg Ile Leu Ser Glu Ser Leu Arg Arg Lys Arg Tyr Ser Arg Leu		
410	415	420
Asp Tyr Leu Ile Asn Gly Ile Tyr Val Asp Ile		
425	430	

<210> 84  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 84  
 agggaggatt atccttgacc tttgaagacc 30  
  
 <210> 85  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 85  
 gaagcaagtg cccagctc 18  
  
 <210> 86  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 86  
 cgggtccctg ctctttgg 18

<210> 87  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 87  
 caccgtagct gggagcgcac tcac 24

<210> 88  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 88  
 agtgtaagtc aagctccc 18

<210> 89  
 <211> 49  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 89  
 gcttcctgac actaaggctg tctgctagtc agaattgcct caaaaagag 49

<210> 90  
 <211> 957  
 <212> DNA  
 <213> Homo Sapien

<400> 90  
 cctggaagat gcgcccattg gctgggtggcc tgctcaagggt ggtgttcgtg 50  
 gtcttcgcct ccttggtgtgc ctggtattcg gggtagctgc tcgcagagct 100  
 cattccagat gcacccctgt ccagtgtgtc ctatagcatc cgcagcatcg 150  
 gggagaggcc tgtcctcaaa gctccagtc ccaaaaggca aaaatgtgac 200  
 cactggactc cctgcccatac tgacacctat gcctacagggt tactcagcgg 250  
 aggtggcaga agcaagtacg ccaaaatctg ctttgaggat aacctactta 300  
 tgggagaaca gctgggaaat gttgccagag gaataaacat tgccattgtc 350  
 aactatgtaa ctgggaatgt gacagcaaca cgatgttttg atatgtatga 400  
 aggcgataac tctggaccga tgacaaagtt tattcagagt gctgctccaa 450  
 aatccctgct cttcatggtg acctatgacg acggaagcac aagactgaat 500



aacgatgcc aagaatgccat agaagcactt ggaagtaaag aaatcaggaa 550  
 catgaaattc aggtctagct ggggtatttat tgcagcaaaa ggcttggaac 600  
 tcccttccga aattcagaga gaaaagatca accactctga tgctaagaac 650  
 aacagatatt ctggctggcc tgcagagatc cagatagaag gctgcatacc 700  
 caaagaacga agctgacact gcagggctct gagtaaattgt gttctgtata 750  
 aacaaatgca gctggaatcg ctcaagaatc ttatTTTTTct aaatccaaca 800  
 gcccatatTT gatgagtatt ttgggTTTTgt tgtaaaccAA tgaacatttg 850  
 ctagttgtat caaatcttgg tacgcagtat ttttatacca gtattttatg 900  
 tagtgaagat gtcaattagc aggaaactaa aatgaatgga aattcttaaa 950  
 aaaaaaa 957

<210> 91  
 <211> 235  
 <212> PRT  
 <213> Homo Sapien

<400> 91  
 Met Arg Pro Leu Ala Gly Gly Leu Leu Lys Val Val Phe Val Val  
 1 5 10 15  
 Phe Ala Ser Leu Cys Ala Trp Tyr Ser Gly Tyr Leu Leu Ala Glu  
 20 25 30  
 Leu Ile Pro Asp Ala Pro Leu Ser Ser Ala Ala Tyr Ser Ile Arg  
 35 40 45  
 Ser Ile Gly Glu Arg Pro Val Leu Lys Ala Pro Val Pro Lys Arg  
 50 55 60  
 Gln Lys Cys Asp His Trp Thr Pro Cys Pro Ser Asp Thr Tyr Ala  
 65 70 75  
 Tyr Arg Leu Leu Ser Gly Gly Gly Arg Ser Lys Tyr Ala Lys Ile  
 80 85 90  
 Cys Phe Glu Asp Asn Leu Leu Met Gly Glu Gln Leu Gly Asn Val  
 95 100 105  
 Ala Arg Gly Ile Asn Ile Ala Ile Val Asn Tyr Val Thr Gly Asn  
 110 115 120  
 Val Thr Ala Thr Arg Cys Phe Asp Met Tyr Glu Gly Asp Asn Ser  
 125 130 135  
 Gly Pro Met Thr Lys Phe Ile Gln Ser Ala Ala Pro Lys Ser Leu  
 140 145 150  
 Leu Phe Met Val Thr Tyr Asp Asp Gly Ser Thr Arg Leu Asn Asn  
 155 160 165

09944834-083701

Asp Ala Lys Asn Ala Ile Glu Ala Leu Gly Ser Lys Glu Ile Arg  
170 175 180

Asn Met Lys Phe Arg Ser Ser Trp Val Phe Ile Ala Ala Lys Gly  
185 190 195

Leu Glu Leu Pro Ser Glu Ile Gln Arg Glu Lys Ile Asn His Ser  
200 205 210

Asp Ala Lys Asn Asn Arg Tyr Ser Gly Trp Pro Ala Glu Ile Gln  
215 220 225

Ile Glu Gly Cys Ile Pro Lys Glu Arg Ser  
230 235

<210> 92  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 92  
aatgtgacca ctggactccc 20

<210> 93  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 93  
aggcttgga ctccttc 18

<210> 94  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 94  
aagattcttg agcgattcca gctg 24

<210> 95  
<211> 47  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 95  
aatccctgct cttcatggtg acctatgacg acggaagcac aagactg 47

<210> 96  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 96  
 ctcaagaagc acgcgtactg c 21  
  
 <210> 97  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 97  
 ccaacctcag cttccgcctc tacga 25  
  
 <210> 98  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 98  
 catccaggct cgccactg 18  
  
 <210> 99  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 99  
 tggcaaggaa tgggaacagt 20  
  
 <210> 100  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 100  
 atgctgccag acctgatcgc agaca 25  
  
 <210> 101  
 <211> 19  
 <212> DNA

09944864.033101

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 101

gggcagaaat ccagccact 19

<210> 102

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 102

cccttcgcct gcttttga 18

<210> 103

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 103

gccatctaatt tgaagcccat cttccca 27

<210> 104

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 104

ctggcgggtgt cctctcctt 19

<210> 105

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 105

cctcggctct ctcactctgtg a 21

<210> 106

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

09944834-083701

<223> Synthetic oligonucleotide probe

<400> 106  
tggcccagct gacgagccct 20

<210> 107  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 107  
ctcataggca ctcggttctg g 21

<210> 108  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 108  
tggctcccag cttggaaga 19

<210> 109  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 109  
cagctcttgg ctgtctccag tatgtacca 30

<210> 110  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 110  
gatgcctctg ttctgcaca t 21

<210> 111  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 111

0944884-03101

ggattctaatt acgactcact atagggctgc ccgcaacccc ttcaactg 48

<210> 112

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 112

ctatgaaatt aaccctcact aaagggaccg cagctgggtg accgtgta 48

<210> 113

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 113

ggattctaatt acgactcact atagggccgc cccgccacct cct 43

<210> 114

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 114

ctatgaaatt aaccctcact aaagggactc gagacaccac ctgaccac 48

<210> 115

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 115

ggattctaatt acgactcact atagggccca aggaaggcag gagactct 48

<210> 116

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide probe

<400> 116

ctatgaaatt aaccctcact aaagggacta ggggggtggga atgaaaag 48

<210> 117

09944884-083101

<211> 48  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 117  
 ggattctaatacgcactcactatagggccccctgagctctcccgtgta48  
  
 <210> 118  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 118  
 ctatgaaattaacctcactaaagggaggctcgccactggtcgtaga48  
  
 <210> 119  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 119  
 ggattctaatacgcactcactatagggcaaggagccgggacccaggaga48  
  
 <210> 120  
 <211> 47  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 120  
 ctatgaaattaacctcactaaagggagggggcccttggtgctgagt47

0944384.083101